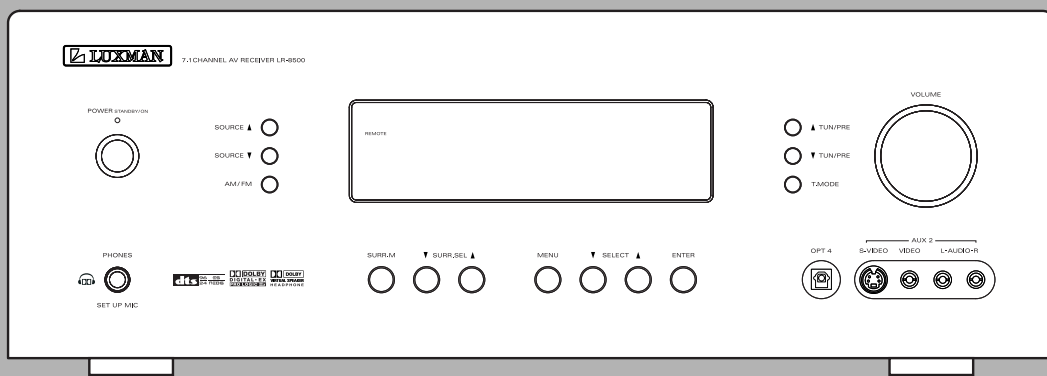


# LUXMAN

## LR-8500

### 7.1 CHANNEL AV RECEIVER

OWNER'S MANUAL



## Important Safety Instructions

### IMPORTANT(for U.K.Customers)

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not provided with a mains plug, or one has to be fitted, then follow the instructions given below:

**IMPORTANT.** DO NOT make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol  $\perp$  or coloured GREEN or GREEN-and-YELLOW.

The wires in the mains lead on this product are coloured in accordance with the following code:

BLUE : NEUTRAL  
BROWN : LIVE

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

When replacing the fuse only a correctly rated approved type should be used and be sure to re-fit the fuse cover.

IF IN DOUBT — CONSULT A COMPETENT ELECTRICIAN.

### CAUTION

The product shall not be exposed to dripping or splashing and that no object filled with liquids, such as vases, shall be placed on the product.

Do not install this equipment in a confined space such as a book case or similar unit.



This symbol means that the product is double insulated and you do not need an earth connection



This symbol means that this product keeps to the European safety and electrical interference directives



### CAUTION

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



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**Thanks for choosing LUXMAN.**  
**Read this manual carefully to get the best performance from this unit.**

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## Before Use

### Read this before operation

- As the unit may become warm during operation, always leave sufficient space above the unit for ventilation.
- The voltage supplied to the unit should match the voltage as printed on the rear panel. If you are in any doubt regarding this matter, consult an electrician.
- Choose the installation location of your unit carefully. Avoid placing it in direct sunlight or close to a source of heat. Also avoid locations subject to vibrations and excessive dust, heat, cold or moisture.
- Do not open the cabinet as this might result in damage to the circuitry or electrical shock. If a foreign object should get into the set, contact your dealer.
- When removing the power plug from the wall outlet, always pull directly on the plug, never yank the cord.
- Do not attempt to clean the unit with chemical solvents as this might damage the finish. Use a clean, dry cloth.
- Keep this manual in a safe place for future reference.

### Back-up Memory Function

This is the function which preserves the preset memory and most-recent memory functions. In the event of a power failure, or if the power cord of this unit is disconnected from the electric outlet, the back-up memory will preserve the preset memory and most-recent memory functions for as long as approximately 15 days.

If the power supply is interrupted for 15 days or longer, the memory settings will be erased.

### When to Use RESET

- When this system is subjected to an electrical shock.
- When the power is irregular.  
In these cases, try the following

**Press the ENTER button for more than 5 seconds.**

### Note:

If the ENTER button is pressed for more than 5 seconds Standby mode, all the memory will be erased.

## Before Connection

### CAUTION

Turn off the power of all the equipment before making connections.

Read instructions of each component you intend to use with this unit.

- Be sure to insert each plug securely. To prevent hum and noise, do not bundle the connection cords with the power cord or speaker cord.

## Description



DTS was introduced in 1994 to provide 5.1 channels of discrete digital audio into home theater systems.

DTS brings you premium quality discrete multi-channel digital sound to both movies and music.

DTS is a multi-channel sound system designed to create full range digital sound reproduction.

The no compromise DTS digital process sets the standard of quality for cinema sound by delivering an exact copy of the studio master recordings to neighborhood and home theaters.

Now, every moviegoer can hear the sound exactly as the moviemaker intended.

DTS can be enjoyed in the home for either movies or music on of DVD's, LD's, and CD's.

"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.



The advantages of discrete multichannel systems over matrix are well known.

But even in homes equipped for discrete multichannel, there remains a need for high-quality matrix decoding. This is because of the large library of matrix surround motion pictures available on disc and on VHS tape; and analog television broadcasts.

The typical matrix decoder of today derives a center channel and a mono surround channel from two-channel matrix stereo material. It is better than a simple matrix in that it includes steering logic to improve separation, but because of its mono, band-limited surround it can be disappointing to users accustomed to discrete multichannel.

Neo:6 offers several important improvements as follow.

- Neo:6 provides up to six full-band channels of matrix decoding from stereo matrix material. Users with 6.1 and 5.1 systems will derive six and five separate channels, respectively, corresponding to the standard home-theater speaker layouts.
- Neo:6 technology allows various sound elements within a channel or channels to be steered separately, and in a way which follows naturally from the original presentation.
- Neo:6 offers a music mode to expand stereo nonmatrix recordings into the five-or six-channel layout, in a way which does not diminish the subtlety and integrity of the original stereo recording.



DTS-ES Extended Surround is a new multi-channel digital signal format developed by Digital Theater Systems Inc. While offering high compatibility with the conventional DTS Digital Surround format, DTS-ES Extended Surround greatly improves the 360-degree surround impression and space expression thanks to further expanded surround signals. This format has been used professionally in movie theaters since 1999.

In addition to the 5.1 surround channels (FL, FR, C, SL, SR and LFE), DTS-ES Extended Surround also offers the SB (Surround Back) channel for surround playback with a total of 6.1 channels. DTS-ES Extended Surround includes two signal formats with different surround signal recording methods, as DTS-ES Discrete 6.1 and DTS-ES Matrix 6.1.

"DTS", "DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.



The stereo CD is a 16-bit medium with sampling at 44.1 kHz. Professional audio has been 20- or 24-bit for some time, and there is increasing interest in higher sampling rates both for recording and for delivery into the home. Greater bit depths provide extended dynamic range. Higher sampling rates allow wider frequency response and the use of anti-alias and reconstruction filters with more favorable aural characteristics.

DTS 96/24 allows for 5.1 channel sound tracks to be encoded at a rate of 96kHz/24bits on DVD Video titles.

When DVD-video appeared, it became possible to deliver 24-bit, 96 kHz audio into the home, but only in two channels, and with serious limitations on picture. This capability has had little use.

DVD-audio allows 96/24 in six channels, but a new player is needed, and only analog outputs are provided, necessitating the use of the D/A converters, and analog electronics provided in the player.

DTS 96/24 offers the following:

1. Sound quality transparent to the original 96/24 master.
2. Full backward compatibility with all existing decoders. (Existing decoders will output a 48 kHz signal)
3. No new player required: DTS 96/24 can be carried on DVD-video, or in the video zone of DVD-audio, accessible to all DVD players.
4. 96/24 5.1-channel sound with full-quality full motion video, for music programs and motion picture soundtracks on DVD-video.

"DTS" and "DTS 96/24" are trademarks of Digital Theater Systems, Inc.

## Description



Dolby Digital identifies the use of Dolby Digital audio coding for such consumer formats as DVD and DTV. As with film sound, Dolby Digital can provide up to five full-range channels for left, center, and right screen channels, independent left and right surround channels, and a sixth (".1") channel for low-frequency effects.

Dolby Surround Pro Logic II is an improved matrix decoding technology that provides better spatiality and directionality on Dolby Surround program material; provides a convincing three-dimensional soundfield on conventional stereo music recordings; and is ideally suited to bring the surround experience to automotive sound. While conventional surround programming is fully compatible with Dolby Surround Pro Logic II decoders, soundtracks will be able to be encoded specifically to take full advantage of Pro Logic II playback, including separate left and right surround channels. (Such material is also compatible with conventional Pro Logic decoders.)

Dolby Digital EX creates six full-bandwidth output channels from 5.1-channel sources. This is done using a matrix decoder that drives three surround channels from the two in the original recording. For best results, Dolby Digital EX should be used with movies soundtracks recorded with Dolby Digital Surround EX.

### About Dolby Pro Logic IIx

Dolby Pro Logic IIx technology delivers a natural and immersing 7.1-channel listening experience to the home theater environment. A product of Dolby's expertise in surround sound and matrix decoding technologies, Dolby Pro Logic IIx is a complete surround sound solution that maximizes the entertainment experience from stereo as well as 5.1-channel encoded sources.

## Connections

### SPEAKER PLACEMENT

The ideal surround speaker system for this unit is 7-speaker systems, using front left and right speakers, a center speaker, surround left and right speakers, surround back left and right speakers, and a subwoofer.

For best results we recommend that all front speakers be of the same type, with identical or similar driver units. This will deliver smooth pans across the front sound stage as the action moves from side to side.

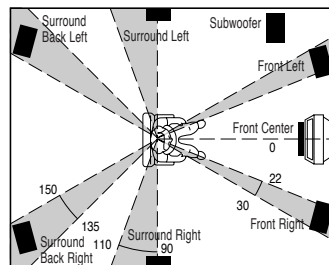
Your center channel speaker is very important as over 80 % of the dialog from a typical motion picture emanates from the center channel.

It should possess similar sonic characteristics to the main speakers. Surround channel speakers need not be identical to the front channel speakers, but they should be of high quality.

The surround center speaker is useful for playback of Dolby Digital Surround EX or DTS-ES. One of the benefits of both Dolby Digital and DTS is that surround channels are discrete full range, while they were frequency limited in earlier "Pro Logic" type systems.

Bass effects are an important part of home theater.

For optimal enjoyment a subwoofer should be used as it is optimized for low frequency reproduction. If you have full range front speakers, however, they may be used in place of a subwoofer with proper setting of the switches in the menu system.



#### Front left and right speakers

We recommend to set the front L and R speakers with 45-60 degrees from the listening position.

#### Center speaker

Align the front line of the center speaker with the front L/R speakers. Or place the center speaker a little backward from the line.

#### Surround left and right speakers

When the LR-8500 is used in surround operation, the preferred location for surround speakers are on the side walls of the room, at or slightly behind the listening position. The center of the speaker should face into the room.

## Connections

### Surround back speakers

Surround back speakers are required when a full 7.1-channel system is installed.

Speakers should be placed on a rear wall, behind the listening position.

The center of the speaker should face into the room.

### Subwoofer

We recommend using a subwoofer to have maximum bass effect. Subwoofer bears only low frequency range so you can place it any where in the room.

### HEIGHT OF THE SPEAKER UNITS

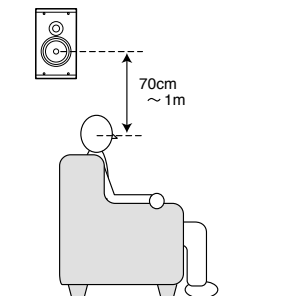
#### Front left and right speakers, and a center speaker

Align the tweeters and mid-range drivers on the three front speakers at the same height, as best as possible.

#### Surround left and right speakers, and surround back speaker

Place the surround left, right and surround back speakers higher than your ears by about 70cm -1m.

Also place the speakers at the same height, as best as possible.

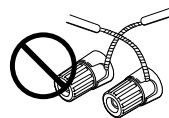
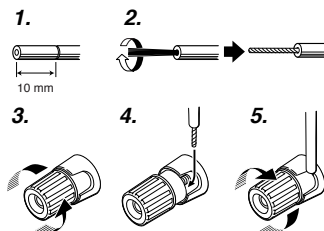


Note:

- Use magnetically-shielded speakers for front left, right and the center speakers when the speakers are installed near the TV and the TV is a monitor type.

### CONNECTING SPEAKER WIRE

1. Strip away approx. 10 mm of wire insulation.
2. Twist the bared wire ends tight, to prevent short circuits.
3. Loosen the knob by turning it counterclockwise.
4. Insert the bare part of the wire into the hole in side of each terminal.
5. Tighten the knob by turning it clockwise to secure the wire.



Caution:

- Be sure to use speakers with the specified impedance as shown on the rear panel of this unit.
- To prevent damage to circuitry, do not let the bare speaker wires touch each other and do not let them touch any metal part of this unit.
- Do not touch the speaker terminals when the power is on. It may cause you to receive an electric shocks.
- Do not connect more than one speaker cable to one speaker terminal. Doing so may damage this unit.

Note:

- Be sure to connect the positive and negative cables for the speaker properly. If they are miss connected, the signal phase will be reversed and the signal quality will be corrupted.

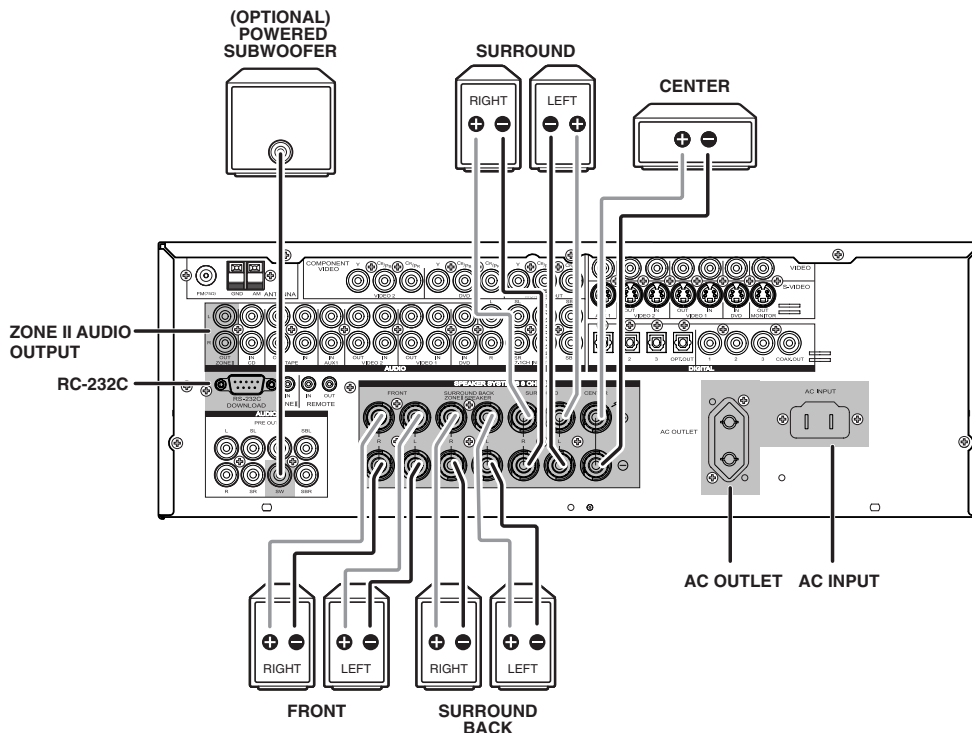
### CONNECTING A SUBWOOFER

Use the PRE OUT SUBWOOFER jack to connect a powered subwoofer (power amplifier built in ).

If your subwoofer is a passive type (power amplifier is not built in), connect a monaural power amplifier to the PRE OUT SUBWOOFER jack and connect the subwoofer to the amplifier.

## Connections

### SPEAKERS, PRE OUT, AC OUTLET, RS-232C



#### ZONE II SPEAKER OUTPUTS

##### Surround Back/ZONE II Speaker Outputs:

These speaker terminals are normally used to power the surround back left/surround back right speakers in a 7.1-channel system. However, they may also be used to power the speakers in a second zone, which will receive the output selected for a ZONE II SPEAKER system. To change the output fed to these terminals from the default of the Surround Back speakers to the ZONE II SPEAKER Output, you must change a setting in the ZONE II SETUP of the OSD system. See page 30 for more information on configuring this speaker output. For ZONE II SPEAKER use, connect the brown and black SBL terminals to the red and black connections on the left remote zone speaker and connect the tan and black SBR terminals to the red and black terminals on the right remote zone speaker.

#### ZONE II AUDIO OUTPUT

Connect these jacks to the optional external audio power amplifier and video distribution system that delivers the source selected for ZONE II distribution.

#### PRE OUT ( SUB WOOFER ) jack

Use this jack to connect a powered sub-woofer or passive sub-woofer with a power amplifier (OPTIONAL).

#### Power cord (AC INPUT)

Be sure to connect the power cord to an AC outlet which supplies the correct voltage.

Hold the power plug when plugging or unplugging the power cord.

#### AC OUTLET (SWITCHED)

This outlet is only active when the receiver is turned on.

##### Caution:

Make sure that the total power consumption of all equipment connected to the outlets on the receiver does not exceed 100 watts.

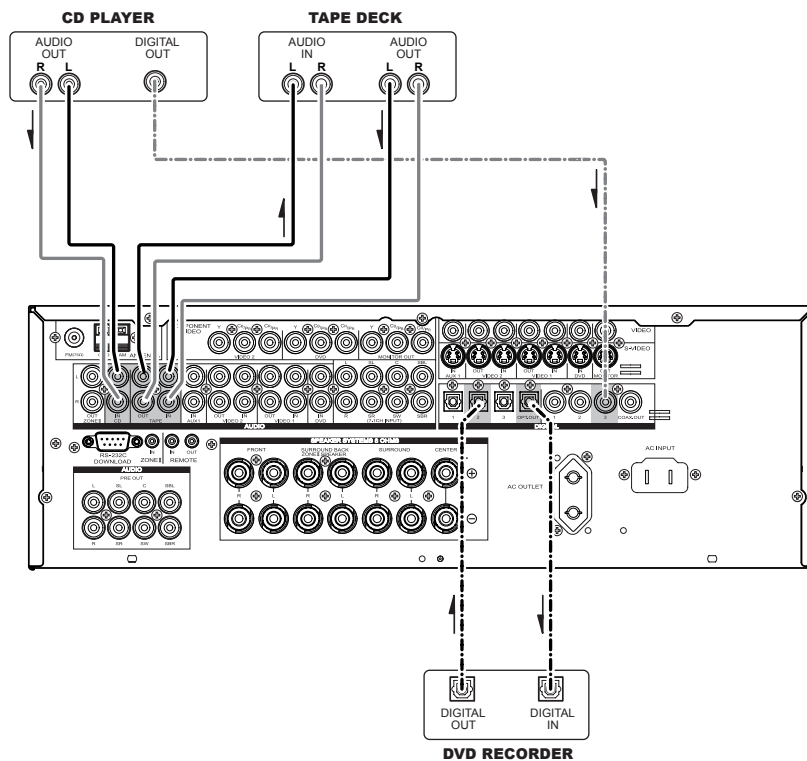
#### RS-232C

The RS-232C port may also be used in the future to update the operating software of the LR-8500 so that it will be able to support new digital audio formats and the like as they are introduced.



## Connections

### AUDIO COMPONENTS



The output audio signal from the TAPE OUT jack is the same signal which is currently selected.

#### Caution:

- Do not connect this unit and other components to mains power until all connections between components have been completed.

#### Notes:

- Insert all plugs and connectors securely. Incomplete connections may make noise.
- Be sure to connect the left and right channels properly. Red connectors are for the R (right) channel, and white connectors are for the L (left) channel.
- Be sure to connect input and output properly.
- Refer to the instructions for each component that is connected to this unit.
- Do not bind audio/video connection cables with power cords and speaker cables this will result in generating a hum or other noise.

### CONNECTING DIGITAL AUDIO COMPONENTS

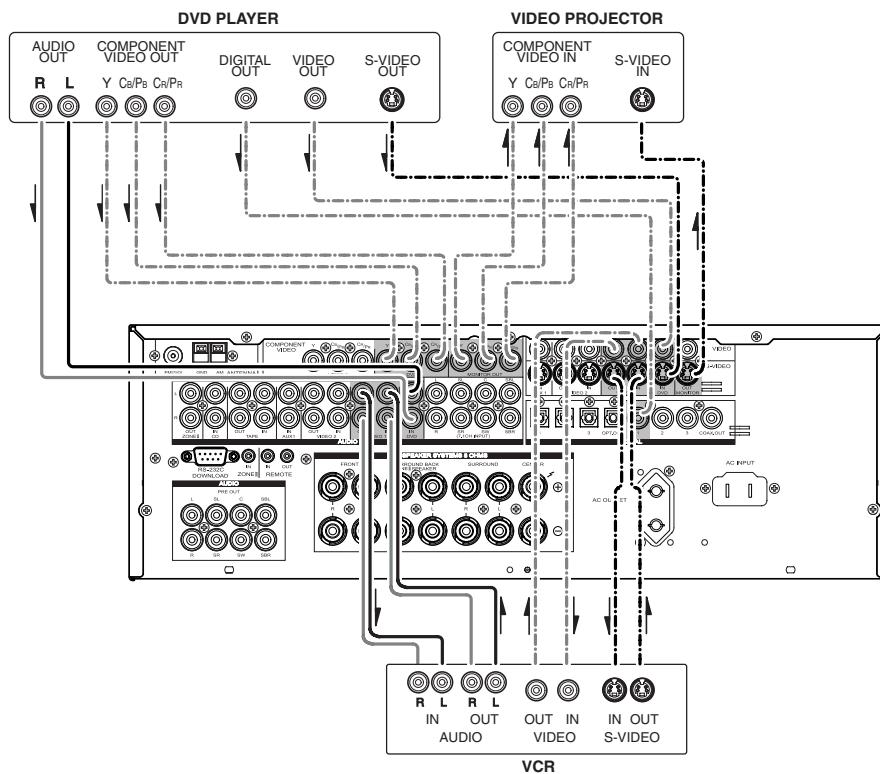
- There are 6 digital inputs, 3 coaxial jacks and 3 optical jacks, on the rear panel. You can use these jacks to input PCM, Dolby Digital and DTS bitstream signals from a CD, DVD, or other digital source components.
- There is one digital output coaxial jack and one optical output jack on the rear panel. These jacks can be connected to a CD recorder, DVD recorder, or a MD deck inputs, respectively.
- Refer to the instructions for each component. To setup the digital audio format of DVD player, or other digital source's connected to digital input jacks.
- You can designate the input for each digital input/output jacks according to your component.

#### Notes:

- There is no Dolby Digital RF input jack. Please use an external RF demodulator Dolby Digital decoder when connecting the Dolby Digital RF output jack of the video disc player to the digital input jack.
- The digital signal jacks on this unit conform to the EIA standard. If you use a cable that does not conform to this standard, this unit may not function properly.
- Each type of audio jack works independently. Signals input through the digital and analog jacks are output through the corresponding digital and analog jacks, respectively.

## Connections

### VIDEO COMPONENTS



### VIDEO, S-VIDEO , COMPONENT JACKS

There are 3 types of video jacks on the rear panel.

#### VIDEO jack

The video signal for the VIDEO jacks is the conventional composite video signal.

#### S-VIDEO jack

The video signal is separated into luminance (Y) and color (C) signals for the S-VIDEO jack. The S-VIDEO signals enables high-quality color reproduction. If your video component has an S-VIDEO output, we recommend to use it. Connect the S-VIDEO output jack on your video component to the S-VIDEO input jack on this unit.

#### Component jack

Make component video connections to a TV or monitor with component inputs to produce higher quality video images. Use a component video cable or 3 video cords to connect the component video out jacks on the LR-8500 to the monitor.

#### Video convert

The input signals S-video are converted video signals can be output.

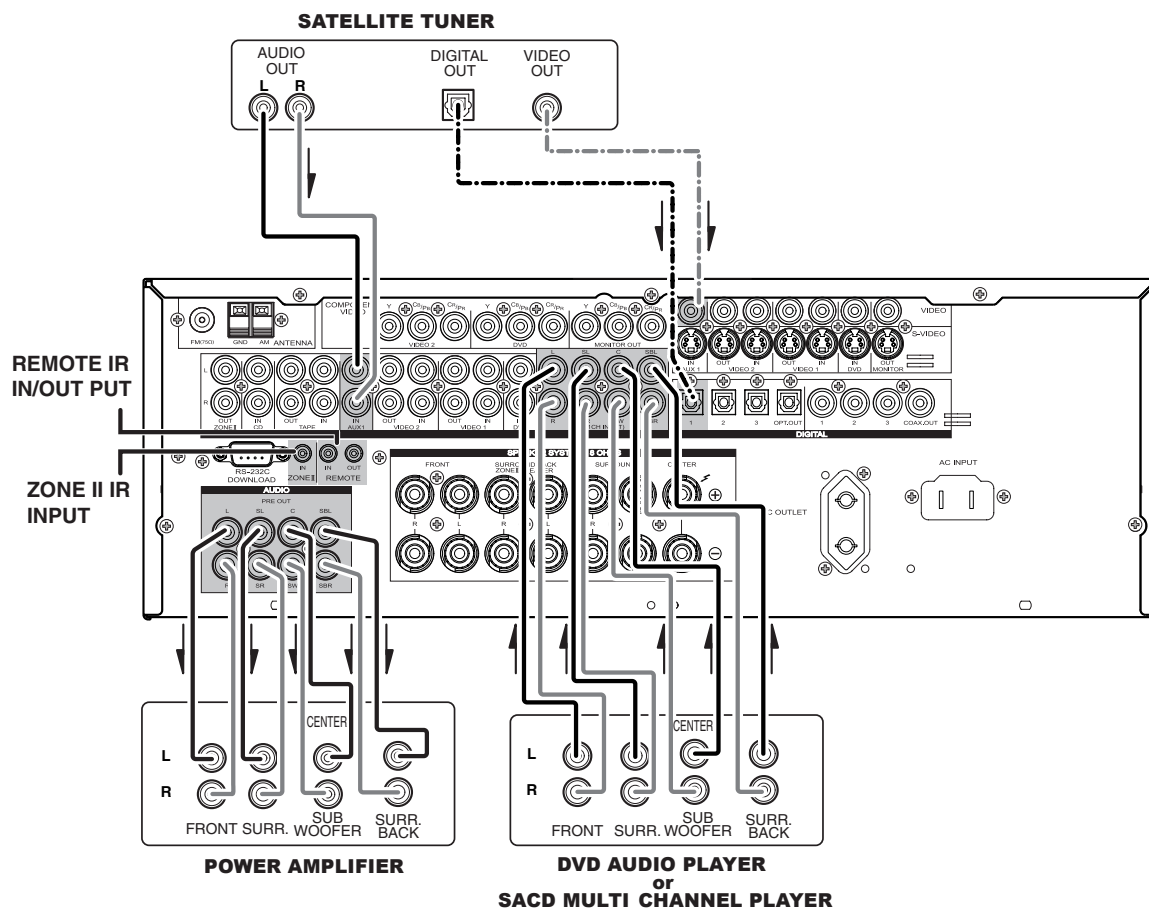
Priority is given to S-VIDEO jack when having input by VIDEO and S-VIDEO jack from the same source.

#### Notes:

- Be sure to connect the left and right audio channels properly. Red connectors are for the R (right) channel, and white connectors are the for L (left) channel.
- Be sure to connect the inputs and outputs of the video signals properly.
- If you connect the S-VIDEO or component signal to the S-VIDEO or component jack on this unit, it is not necessary to connect the conventional video signal to the VIDEO (composite) jack. If you use both video inputs, this unit gives priority to the S-VIDEO signal.
- Each type of video jack works independently. Signals input to the VIDEO (composite) and S-VIDEO jacks or component are output to the corresponding VIDEO (composite) and S-VIDEO or component jacks, respectively.
- You may need to setup the digital audio output format of your DVD player, or other digital source components. Refer to the instructions of the each component connected to the digital input jacks.
- There is no Dolby Digital RF input jack. Please use an external RF demodulator with a Dolby Digital decoder to connect a video disc player which has a Dolby Digital RF output jack to the digital input jack on this unit.

## Connections

### VIDEO COMPONENTS AND ADVANCED CONNECTING



#### CONNECTING MULTI CHANNEL AUDIO SOURCE

The 7.1 CH DIRECT INPUT jacks are for multichannel audio source such as a SACD multichannel player, DVD audio player or external decoder.

If you use these jacks, switch on the 7.1 CH DIRECT INPUT and set the 7.1 CH DIRECT INPUT level by using the 7.1 channel input level menu.

#### CONNECTING AN EXTERNAL POWER AMPLIFIER

The PREOUT jacks are for connecting external power amplifiers.

Be sure to connect each speaker to the corresponding external power amplifier.

#### REMOTE IR INPUT

If the LR-8500's front-panel IR sensor is blocked due to cabinet doors or other obstructions, an external IR sensor may be used. Connect the output of the sensor to this jack.

#### ZONE II IR Input

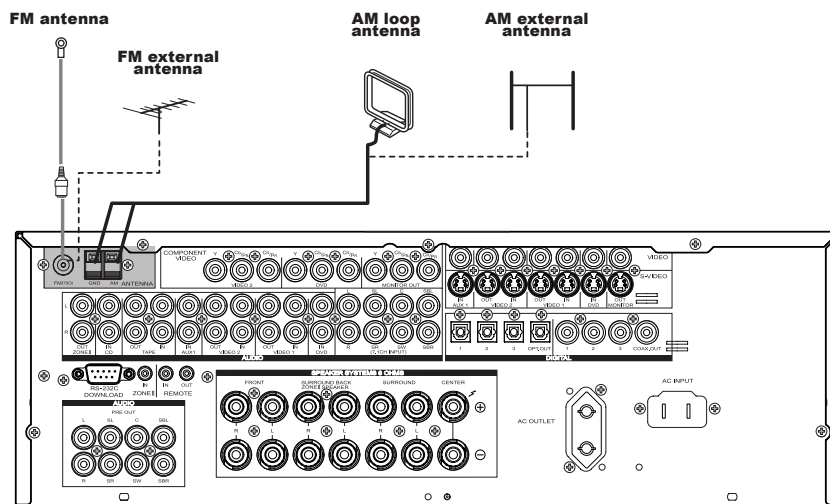
Connect the output of an IR sensor in a remote room to this jack to operate the LR-8500's ZONE II control system.

#### REMOTE IR OUTPUT

This connection permits the IR sensor in the receiver to serve other remote controlled devices. Connect this jack to the "IR IN" jack on LUXMAN (or other compatible) equipment.

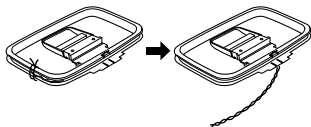
## Connections

### CONNECTING THE ANTENNA TERMINALS

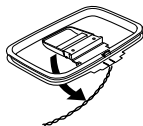


### ASSEMBLING THE AM LOOP ANTENNA

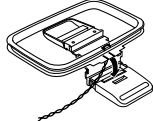
1. Release the vinyl tie and take out the connection line.



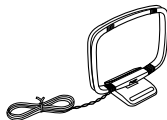
2. Bend the base part in the reverse direction.



3. Insert the hook at the bottom of the loop part into the slot at the base part.



4. Place the antenna on stable surface.



### CONNECTING THE SUPPLIED ANTENNAS

#### Connecting the supplied FM antenna

The supplied FM antenna is for indoor use only.

During use, extend the antenna and move it in various directions until the clearest signal is received.

Fix it with push pins or similar implements in the position that will cause the least amount of distortion.

If you experience poor reception quality, an outdoor antenna may improve the quality.

#### Connecting the supplied AM loop antenna

The supplied AM loop antenna is for indoor use only.

Set it in the direction and position it to where you receive the clearest sound. Put it as far away as possible from the unit, televisions, speaker cables, and power cords.

If you experience poor reception quality, an outdoor antenna may improve the quality.

1. Press and hold down the lever of the AM antenna terminal.
2. Insert the bare wire into the antenna terminal.
3. Release the lever.

### CONNECTING AN FM OUTDOOR ANTENNA

#### Notes:

- Keep the antenna away from noise sources (neon signs, busy roads, etc.).
- Do not put the antenna close to power lines. Keep it well away from power lines, transformers, etc.
- To avoid the risk of lightning and electrical shock, grounding is necessary.

### CONNECTING AN AM OUTDOOR ANTENNA

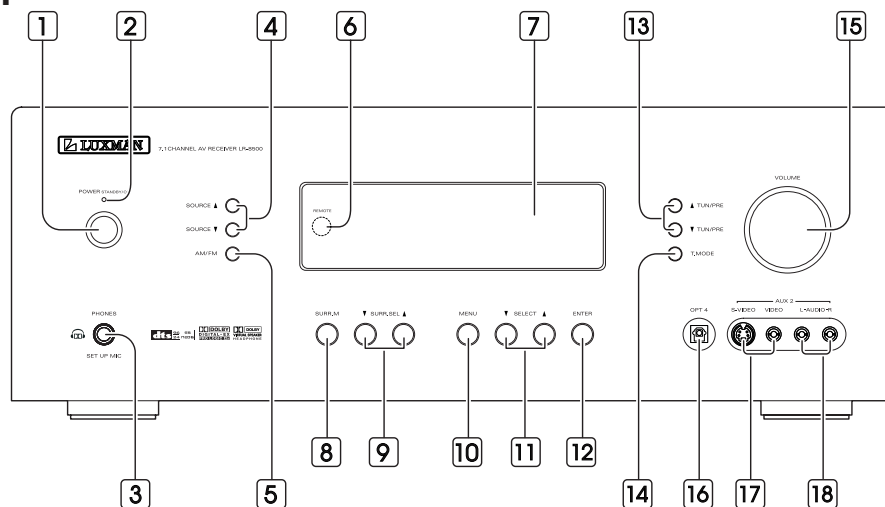
An outdoor antenna will be more effective if it is stretched horizontally above a window or outside.

#### Notes:

- Do not remove the AM loop antenna.
- To avoid the risk of lightning and electrical shock, grounding is necessary.

## Control Functions

### Front Panel



#### 1 Main Power Switch

Press this button to turn the unit standby or off.

#### 2 Power Indicator

This LED Lights amber when the unit is in the standby mode to signal that the unit is ready to be turn on, when the unit is in operation, the indicator is blue.

#### 3 PHONES/SETUP MIC

- This jack may be used to listen to the LR-8500's output through a pair of headphones.

The speakers will automatically be turned off when the headphone jack is in use.

- When configuring your system using ROOM AUTO SETUP, the calibration microphone should be plugged into this jack using the supplied adaptor that converts the small mini-plug at the end of the microphone's cord to a 1/4" plug.

#### 4 SOURCE (▲/▼)

Use these to select inputs. Also, these buttons used power on switch when main power switch "ON" press these buttons to turn on the unit.

#### 5 AM/FM

Use this to switch between AM and FM bands.

#### 6 Remote Sensor

When operating the remote control unit, point it toward the remote sensor.

#### 7 Display

When the unit on, the current status of the unit is displayed.

#### 8 Surround Mode Group selector

Press this button to select the top-level group of surround modes.

Each press of the button will select the current or last used mode in each of the surround mode.

#### 9 Surround Mode selector (▼/▲)

Press these buttons to select from among the available surround mode options for the mode group and if the input source is digital or analog.

#### 10 MENU

Press repeatedly to select TONE MODE, CHANNEL Level, Digital Input, Speaker Setup, Distance Adjust.

#### 11 SELECT (▼/▲)

When configuring the MENU settings, use these buttons to select from available choice.

#### 12 ENTER

When marking choices during the setup and configuration process, press this button to enter the desired setting.

#### 13 TUN/PRE (▲/▼)

In Tuner mode, use these to tune in station.

#### 14 T.MODE

Press this button to select Auto or Manual tuning.

#### 15 VOLUME

Turn this knob to adjust the master volume.

#### 16 OPT 4 Digital Input Jack

Connect the optical digital audio output of an audio or video product to this jack.

#### 17 VIDEO Input Jacks

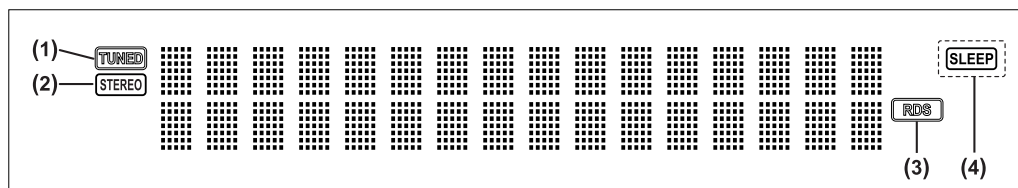
These jacks may be used for temporary connection to the composite or S-Video output of video games, camcorders or other portable video products.

#### 18 AUDIO Input Jacks

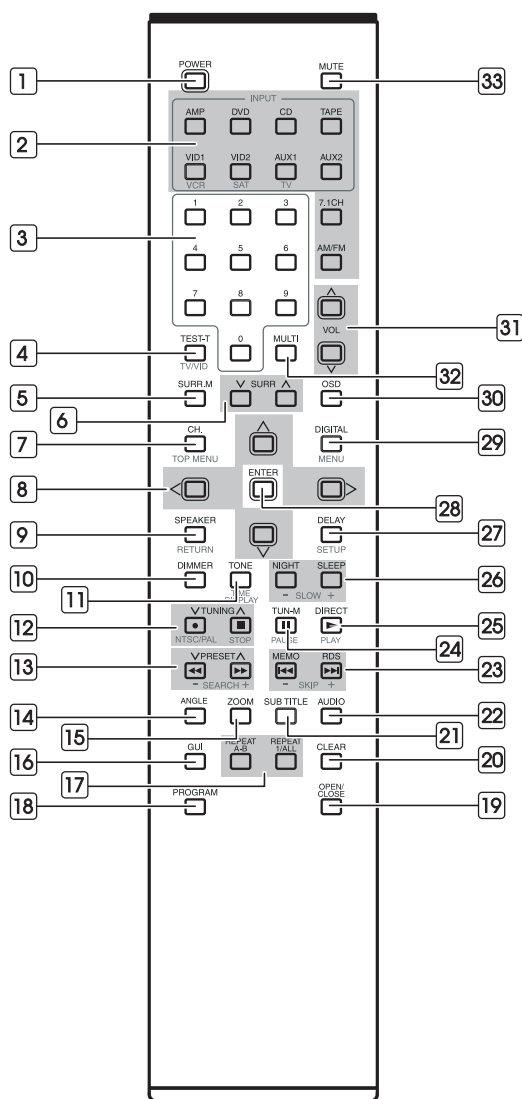
These audio jacks may be used for temporary connection to video games or portable audio players.

## Control Functions

### Display



### Remote Control Unit



**1** Illuminates when a station is tuned.

**2** STEREO indicates in the tuner mode.

**3** RDS MODE indicator

**4** SLEEP indicator

Lights up when the sleep timer is active.

#### **1** POWER

System power on and off.

#### **2** FUNCTION buttons

Use these buttons to select function modes.

#### **3** Numeric buttons

These buttons serve as a 10 button numeric keypad to enter tuner preset positions.

#### **4** TEST-T

- Output test tone for setting speaker levels.

#### **TV / VID**

- This button does not have a direct function on the LR-8500, but when used with a compatibly programmed VCR, DVD or satellite receiver that has a "TV / VIDEO" function, pressing this button will switch between the output of the player or receiver and the external video input to that player.

Consult the owner's manual for your specific player or receiver for the details of how it implements this function.

#### **5** SURR. M

Press repeatedly to select the top-level group of surround modes.

## Control Functions

### 6 SURR (v/^)

Press this button to select from among the available surround mode options for the mode group selected.

### 7 CH.

- Press to select CHANNEL LEVEL. (AMP only)

#### TOP MENU

- Press to call up the top menu. (DVD only)

### 8 DIRECTION

- Use to move through the options on menu screens.

### 9 SPEAKER

- Press this button to begin the process of configuring this unit's bass management system for use with the type of speakers used in your system.

#### RETURN

- Use to go one menu back (current setting are maintained). (DVD only)

### 10 DIMMER

Press to adjust the brightness of the front display.

### 11 TONE

- This button used Bass/Treble control.

#### TIME DISPLAY

- Use this button to display time information about the currently playing disc. (DVD only)

### 12 TUNING UP/DOWN

- When the tuner is in use, these buttons will tune up or down through the selected frequency band.

#### ● Record

- Press to start normal recording. (DVD only)

#### NTSC/PAL

- Use this button to select NTSC, PAL or MULTI to match your TV standard. (DVD only)

#### ■ STOP

- Press to stop playback. (DVD only)

### 13 PRESET UP/ DOWN

- Press to select a tuner preset channel.

#### SEARCH( ◀▶/▶▶ )

- During playback, these buttons are used for fast forward and fast reverse. (DVD only)

### 14 ANGLE

Selects a DVD camera angle if available. (DVD only)

### 15 ZOOM

Enlarges the DVD Audio image. (DVD only)

### 16 GUI

Brings up the ON-SCREEN display. (DVD only)

### 17 REPEAT

#### A-B

- To repeat a specific section on a disc. (DVD only)

#### 1/ALL

- To repeat chapter, track, title, disc(s). (DVD only)

### 18 PROGRAM

Press to programming DVDs, CDs, Video CDs and MP3. (DVD only)

### 19 OPEN / CLOSE

Opens or close the disc tray. (DVD only)

### 20 CLEAR

Removes a track number on the program menu. (DVD only)

### 21 SUB TITLE

Select a subtitle language. (DVD only)

### 22 AUDIO

Selects different audio languages available in the DVD disc. (DVD only)

### 23 MEMO

- In Tuner mode to program preset radio stations.

#### RDS

- This function is used display information that is broadcasted by FM stations.

#### SKIP (◀◀/▶▶)

- When playing discs, press ◀◀ to go back to the beginning of the current chapter / track and ▶▶ to advance to the next chapter / track. (DVD only)

### 24 TUN-M

- Switches from tuning to (manual or auto) tuning mode.

#### PAUSE(II)

- Press to pause playback of a disc. (DVD only)

### 25 DIRECT

- Press this button when the tuner is in use to start the sequence for direct entry of a station's frequency.

#### PLAY (▶)

- Press to start or resume playback. (DVD only)

### 26 NIGHT

- Press this button to activate the night mode. This mode is available in specially encoded digital sources, and it preserves dialogue(center channel) intelligibility at low volume levels.

#### SLEEP

- Press to set the sleep timer.

#### SLOW( -, +)

- Press to watch a disc with a slower speed. (DVD only)



## Control Functions

### 27 DELAY

- Press this button to begin the process for setting the delay times used LR-8500 when processing surround sound or to compensate for video-to-audio delays caused by the use of digital sources or video displays.

#### SET UP

- Enter or exit the system setup menu. (DVD only)

### 28 ENTER

Press to enter setting.

### 29 DIGITAL

- Press this button to assign one of the digital inputs to a source

#### MENU

- Access the menu on a DVD disc. (DVD only)

### 30 OSD

- Press this button to activate the ON-Screen Display(OSD) system used to set up.
- Select to NTSC or PAL (press this button for more than 3 seconds).

### 31 VOL (^/v)

Press to adjust volume.

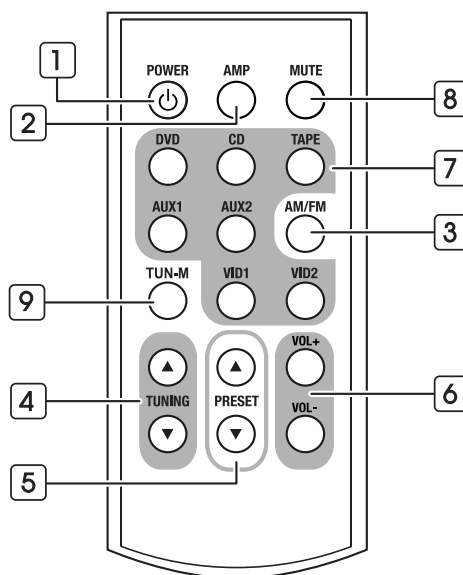
### 32 MULTI

Press to select ZONE II ON/OFF, ZONE II INPUT and ZONE II Volume.

### 33 MUTE

Press to activate the mute function.

## ZONE II Remote Control Unit



### 1 POWER

When used in the room where the LR-8500 is located, press this button to place the unit in Standby. When it is used in a remote room with a sensor that is connected to the ZONE II IR Input jack, this button turns the ZONE II system on and off.

### 2 AMP

Press this button to turn on the LR-8500. The input in use when the unit was last on will be selected.

### 3 AM/FM Tuner Select Button

Press this button to select the Tuner as the input to the ZONE II system. Press it again to change between the AM and FM bands.

### 4 TUNING Up/Down

When this remote is used in the same room as the LR-8500, these buttons may be used to change the frequency of tuner.

### 5 PRESET Up/Down

When the LR-8500's tuner is selected as the input source, these buttons will move up or down through the list of stations that have been stored in the preset memory.

### 6 Volume Up/Down Buttons

When used in the room where the LR-8500 is located, press this button to raise or lower the volume in that room. When used in a remote room with a sensor that



## Control Functions

is connected to the ZONE II IR Input jack, this button will raise or lower the volume in the remote room.

### 7 INPUT Selectors

When the LR-8500 is off, press one of these buttons to select a specific input and turn the unit on. When the unit is already in use, pressing one of these buttons will change the input.

### 8 MUTE

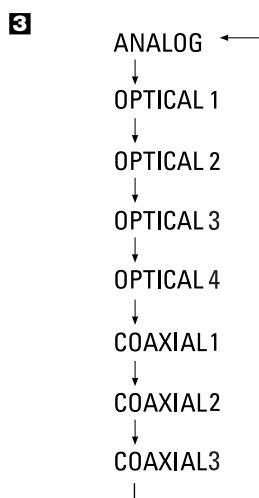
When used in the room where the LR-8500 is located, press this button to temporarily silence the unit. When it is used in a remote room with a sensor that is connected to the ZONE II IR Input jack, this button will temporarily silence the feed to the remote room only. Press the button again to return to the previous volume level.

### 9 TUN-M

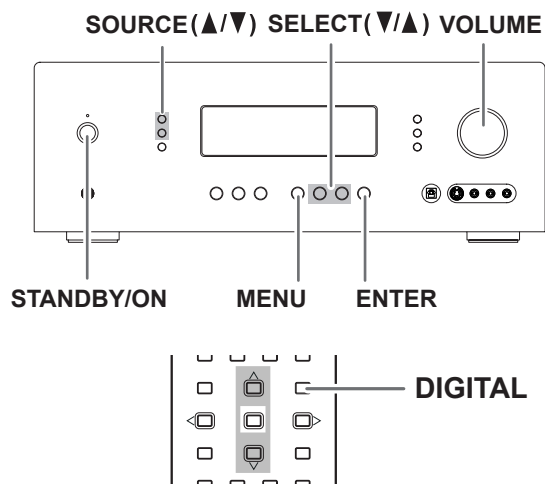
Switches from tuning to (manual or auto) tuning mode.

#### NOTES:

- The ZONE II remote may be used in either the same room where the LR-8500 is located, or it may be used in a separate room with an optional infrared sensor that is connected to the LR-8500's ZONE II IR Input jack. When it is used in the same room as the LR-8500, it will control the functions of the LR-8500 or any compatible LUXMAN products in that room. When it is used in a separate room via a sensor connected to the ZONE II IR Input jack, the button for Power, Input Source, Volume and Mute will control the source and volume for the second zone, as connected to the ZONE II Audio Output jacks. (See page 30 for complete information on using the ZONE II system.)



## Basic Operations 1



**1** Press the STANDBY/ON button.

**2** Select a source by pressing the SOURCE (▲/▼) button repeatedly.

DVD  
CD  
TUNER  
TAPE  
7.1 CH DIRECT IN  
VIDEO 1  
VIDEO 2  
AUX 1  
AUX 2

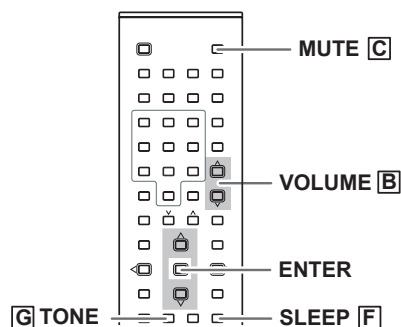
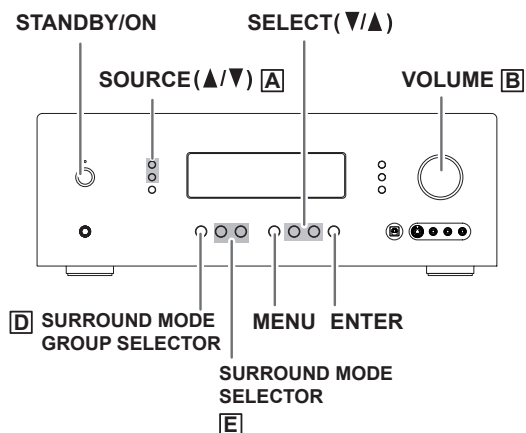
**3** Press DIGITAL button and press the ▲ or ▼ button repeatedly to select one of the digital inputs or the analog input for any source.

or

1. Press the MENU button on the front panel.
2. Each time the SELECT(▲ or ▼) button is pressed until "DIGITAL INPUT" displayed on the front panel.
3. Press the ENTER button.
4. Each time the SELECT(▲ or ▼) button is pressed to select you desired input.

**4** Play the source, and gradually turn up the volume to the required level with the VOLUME control.

## Basic Operations 2



### [A] SOURCE (▲/▼)

Press to select input sources.

### [B] VOLUME knob

To control the overall listening level, turn the MASTER VOLUME knob or press the VOLUME buttons (+/-) on the remote control unit.

### [C] MUTE

To mute the sound temporarily, press the MUTE button. Press the MUTE button again to restore the sound. If you change the volume during the muting, the muting will be canceled.

While muting is engaged, the MUTE indicator will flicker.

### [D] Surround Mode Group Selector

Press this button to select the top-level group of surround modes.

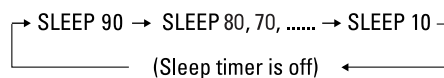
Each press of the button will select the current or last used mode in each of the surround mode groups.

### [E] Surround Mode Selector

Press this button to select from among the available surround mode options for the mode group selected.

### [F] Sleep Timer Function

This function allows you to preprogram the receiver to switch its own power off automatically. You can then enjoy the audio/video system for a specified amount of time without having to worry about turning the unit off later. Each press of the SLEEP button changes the time indication by 10 minutes.



To let the remaining time (until power off) appear on the display while the sleep timer is engaged, press the SLEEP button once.

### [G] TONE Control

**1** Press the TONE button or press the MENU button and ENTER button on the front panel in serial order.

"TONE IN" appears on the front panel's display.

**2** Press the ENTER button.

"BASS ADJUST" appears on display.

**3** Press the ▲/▼ button to select "BASS ADJUST" or "TREBLE ADJUST" or press the SELECT (▼/▲) button and press the ENTER button on the front panel.

- To adjust the level of low frequency sound range, select "BASS ADJUST".
- To adjust the level of high frequency sound range, select "TREBLE ADJUST"

**4** Press the ▲/▼ buttons of remote control unit or the SELECT (▼/▲) button to change the setting. The level can be adjusted in 1 dB steps from -10 to +10.

## Surround Mode

One of the most important features of the LR-8500 is its ability to reproduce a full multichannel surround sound field from digital sources, analog matrix surround-encoded programs and standard stereo programs. Surround modes may be changed at any time by using either the front panel or remote controller.

- 1 Press the SURR.M button (or the SURR.M button on the remote controller) from the front panel until the desired major surround mode group such as Dolby or DTS is selected to select a new surround mode.
- 2 Press the SURR. SEL(▼/▲) button (or the SURR(v/▲) on the remote controller) repeatedly until choose the specific individual.
  - The Dolby Digital, Dolby Digital EX and DTS 5.1, DTS-ES Matrix and DTS-ES Discrete modes may only be selected when a digital input is in use.
  - The Dolby Pro Logic IIx modes are available only when the LR-8500 has been configured for 6.1/7.1 operation by configuring the Surround Back speakers as either "Large" or "Small"
  - When the 7.1 CH direct inputs are in use there is no surround processing, as these inputs take the analog output signals from an optional, external DVD-Audio or SACD player, or another source device and carry them straight through to the volume control without any further digital processing.
  - To listen to a program in traditional two-channel stereo, using the front left and front right speakers only (plus the subwoofer, if installed and configured).

NOTE: Once a program has been encoded with matrix surround information, it retains the surround information as long as the program is broadcast in stereo. Thus, movies with surround sound may be decoded via any of the analog surround modes such as Dolby Pro Logic II Movie or DTS Neo:6 Cinema, when they are broadcast via conventional TV stations, cable, pay-TV and satellite transmission. In addition, a growing number of made-for-television programs, sports broadcasts, radio dramas and music CDs are also recorded in surround sound.

## Night Mode

In many listening situations, you may find loud passages objectionable. Adjusting this setting allows you to compress the sounds into a range that you may find more suitable for a particular listening situation. Dolby Digital satisfies these needs through the dynamic range controlling. Select one of the followings to fit the individual listening situation of the audience.

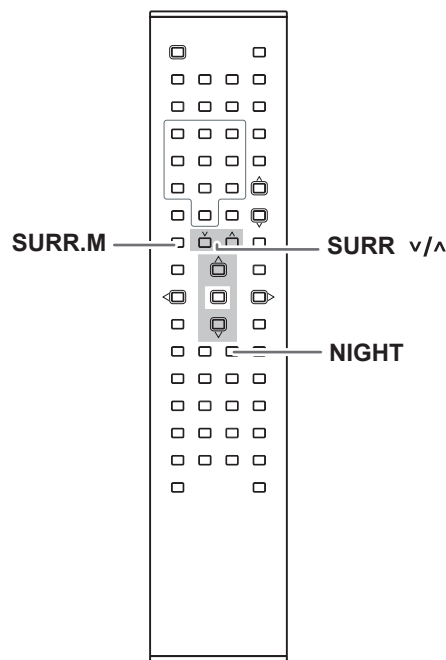
- 1 The Night mode may be engaged when a Dolby Digital DVD is playing by pressing the NIGHT button.
- 2 Press the ▲/▼ buttons to select either the middle range of full-compression versions of the Night mode.
 

MAX:  
Audio with fully compressed dynamic range.

MID:  
Audio with partially compressed dynamic range.

OFF:  
Audio with uncompressed dynamic range. Select this when you don't want to use the night mode.

- This function is effective only when playing back a DVD disc recorded with Dolby Digital. This control has no effect on other discs.



## ***ZONE II Operation***

When operation the LR-8500 from a remote room location where an IR sensor link has been connected to the LR-8500's rear-panel ZONE II IR Input you may use either the main remote control or the ZONE II remote controller.

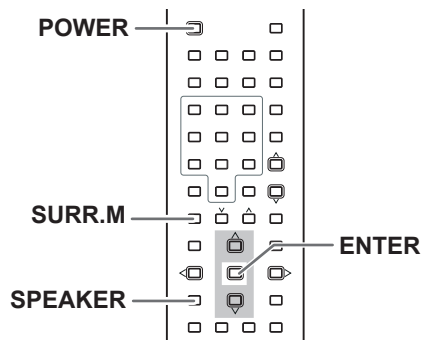
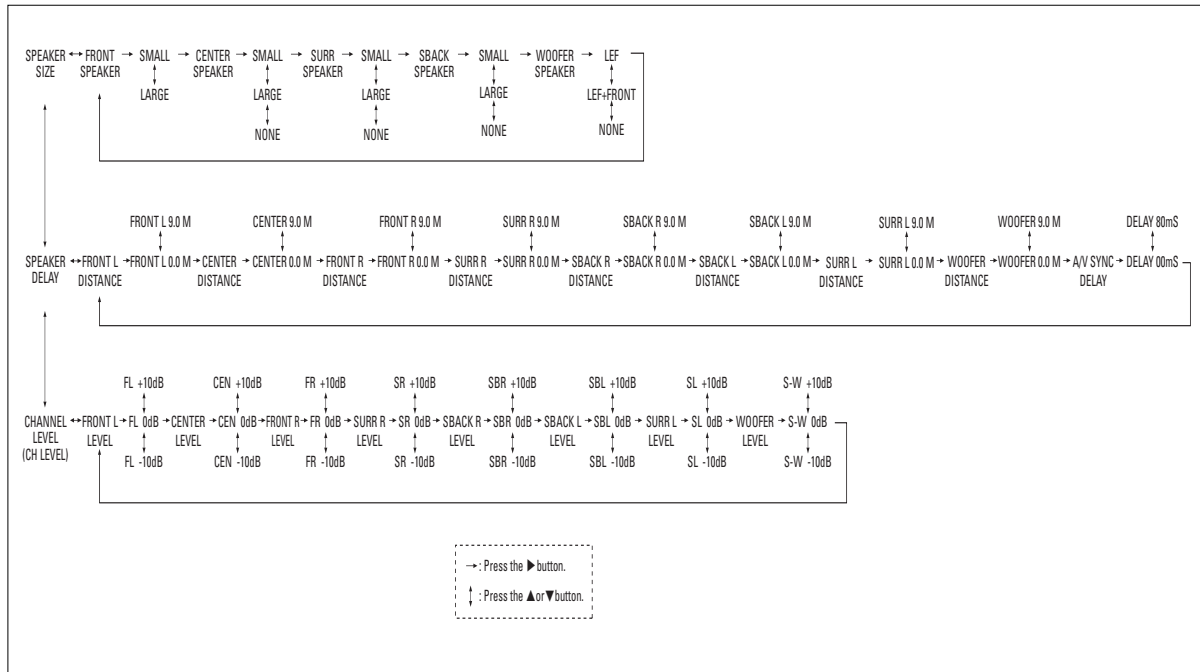
To activate the feed to the remote room, while you are main listening room where the LR-8500 is located,

- 1** Press the MULTI button on the main remote controller and then press the ENTER button to turn the ZONE II on or off.
- 2** Press the ▲/▼ button to select "ZONE II INPUT" or "ZONE II Volume" and then press the ENTER button.
- 3** Press the ▲/▼ button repeatedly until the desired input source or level. The level can be adjust in 1dB steps from -80 to +10.

### **NOTE:**

- When the ZONE II system is turned on, the input selected using the ZONE II menu will be fed to the ZONE II Audio Outputs on the rear panel. The volume will be as set in the previous selection, although it may also be adjusted using an optional IR sensor and the ZONE II remote in the remote location, or on the optional audio power amplifier connected to the ZONE II Audio Outputs.
- Even when the LR-8500 is turned off in the main room, the ZONE II system may be turned on the any time by pressing any of the Selector buttons on the ZONE II remote controller in the remote room. When the ZONE II system is activated, you may turn it off from the remote room location by pressing the Power Off Button on the remote. The ZONE II system may only be turned off using the MULTI button in the main room if the LR-8500 is turned on.

## Speaker Configuration



round mode for 7.1 channel (such as DOLBY PRO LOGIC IIx MUSIC or MOVIE, etc).

### 3 Press the SPEAKER button.

"FRONT SPEAKER" appears on the front panel's display.

### 4 Press the ENTER button.

"FRONT LARGE" or "FRONT SMALL" appears on the display.

### 5 Press the ▲/▼ buttons to change the setting.

### 6 Press the ENTER button.

The setting is saved in memory.

### 8 Press the ▲ button.

The next configuration (CENTER) appears on the display.

Repeat step 4 to 8 to set other configurations. When all the configurations have been finished, press the SPEAKER button (or leave the unit for 5 seconds) to exit the Speaker Setup mode.

It is important to perform speaker configuration prior to using the surround sound decoder.

This allows the unit to sense the available speakers and automatically select decoding modes. It is possible to receive multi-channel surround sound without a center speaker, but for best results with Dolby Pro Logic IIx and Dolby Digital decoding, at least 5 speakers (Left, Center, Right, Left Rear and Right Rear) should be used.

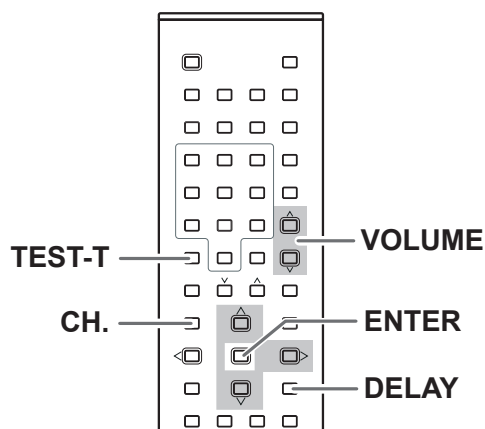
- When no action is taken for 10 seconds, the Speaker Setup mode will be cancelled.

## Size of Speakers

### 1 Press the POWER button to turn the unit on.

### 2 Press the SURR.M button and select another sur-

## Speaker Configuration



### Input the distance from your listening position

**1 Press the DELAY button to "FRONT L DISTANCE" appears on the front panel's display.**

**2 Press the ENTER button.**

"FRONT" appears on the display.

**3 Press the ► button.**

"FRONT L 3.0 M" appears on the display.

**4 Press the ▲/▼ buttons to change the setting.**

Input the distance from your listening position to front speakers.

You can change the setting from 0.0 to 9.0 M.

**5 Press the ENTER button.**

**6 Press the ▲ button.**

The next configuration (CENTER DISTANCE) appears on the display.

Repeat step **2** to **6** to change the setting for center and surround speakers.

When all the configurations have been finished, press the DELAY button (or leave the unit for 8 seconds) to exit the Delay Adjust mode.

**NOTE:** LR-8500 allows you to adjust the delay for the combined output of all speakers as a group.

This feature is called A/V SYNC Delay it allows you to compensate for delays to the video image that may be caused by the processing in products such as digital video display, video scalers, digital cable or satellite systems, or personal video recorders with proper adjustment of the setting for A/V SYNC Delay, you can eliminate the loss of lip sync that may be caused by Digital video applications.

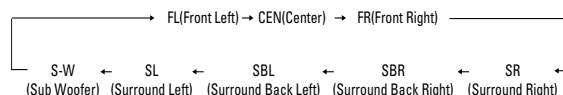
### Balancing relative volume between speakers using Test Tone

The test tone function is useful to adjust the relative volume between speakers.

Once the balance is set, you don't have to change the balance as long as the speakers aren't moved.

**1 Press the TEST-T button.**

The test tone is emitted from each speaker in the following order at 2-second intervals.



**2 Adjust the volume to the normal listening level.**

**3 Adjust the volume of each speakers so that the test tone from each speakers sounds the same.**

The level of the speaker which is emitting the test tone can be changed by pressing the ▲/▼ buttons.

- The level can be adjusted in 1 dB steps from -10 dB to +10 dB.

**4 When the setting has been finished, press the TEST-T button to stop the test tone.**

### Output Level Adjustment (Balancing relative volume between speakers)

**1 Press the CH. button.**

"FRONT L LEVEL" (Level of Front Left) appears on the display.

**2 Press the ENTER button.**

"FL LEVEL 0 dB" appears on the display.

**3 Press the ▲/▼ buttons to change the setting.**

The level can be adjusted in 1 dB steps from -10 dB to +10 dB.

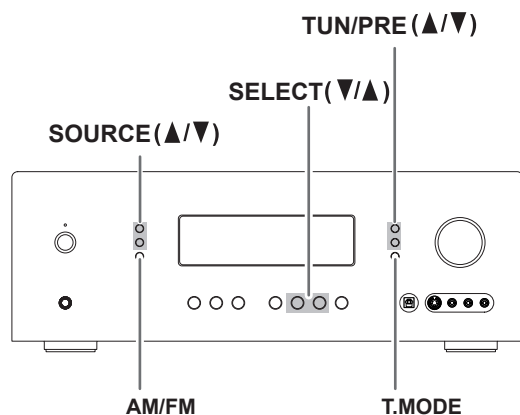
**4 Press the ENTER and press the ▲ button.**

The next configuration (CENTER LEVEL) appears on the display.

Repeat step **2** to **4** to change other settings.

When all the configurations have been finished, press the CH. button (or leave the unit for 10 seconds) to exit the CH Level Adjust mode.

## Tuner Operation



The LR-8500's tuner is capable of tuning AM, FM and FM Stereo broadcast stations. Stations may be tuned manually, or they may be stored as favorite station presets and recalled from a 50-position memory.

### Station Selection

- 1 Press the AM/FM button on the remote controller to select the tuner as an input

or

The tuner may be selected from the front panel by either pressing the SOURCE (▲/▼) buttons until the tuner is active or by pressing the AM/FM button.

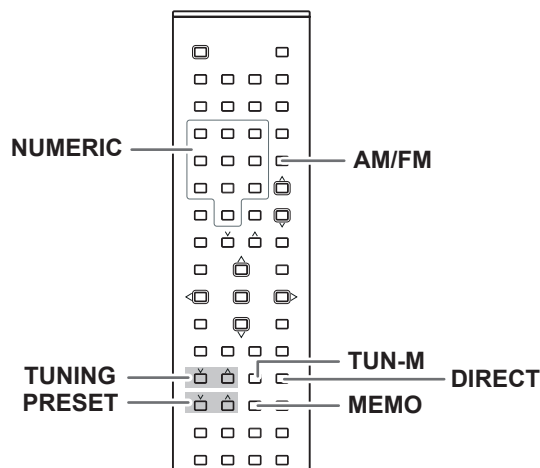
- 2 Pressing the AM/FM button or the AM/FM button on the front panel again to switch between AM and FM so that the desired frequency band is selected.

- 3 Press the T.MODE on the front panel (or the TUN-M button on the remote controller) to select manual or automatic tuning.

- 4 Select "AUTO TUNING" and each press of the TUNING(v/^) button (or TUN/PRE button). Then put the tuner in a scan mode that seek the next higher or lower frequency station with acceptable signal strength.

- Select "MAUNAL TUNING" and each press of the TUNING(v/^) button (or TUN/PRE button). The frequency increases or decreases by one increment.

- 5 Stations may also be tuned directly. To enter a station's frequency directly, first select the AM or FM. Next, press the DIRECT button on the remote controller and enter the station frequency by pressing the Numeric buttons.



### Tuner-Mode

Pressing the TUN-M button on the remote controller alternates between Stereo mode and Mono mode.

#### - STEREO

FM stereo broadcasts are received in stereo and the STEREO indicator lights in the display.

#### - MONO

To compensate for weak FM stereo reception, select this mode. Reception will now be forced monaural, reducing unwanted noise.

### Preset Memory

You can preset a maximum of 50 favorite channels.

- 1 Press the MEMO button. The two underscore lines will appear at the far right side of the display.

- 2 Within 5 seconds, press the Numeric buttons corresponding to the location where you wish to store this station's frequency.

- 3 Repeat the process after tuning any additional stations to be preset.

#### Recalling Preset Stations

- To manually select a station previously entered in the preset memory, press the Numeric buttons that correspond to the desired station's memory location.
- To manually tune through the list of stored preset stations one by one, press the PRESET(v/^) button or the remote controller or the TUN/PRE (▲/▼) button on the front panel.

## ***RDS (Radio Data System) (Remote Controller Only)***

RDS is a broadcasting service which allows stations to send additional information along with the regular radio program signal. RDS can be received only in FM band. Every time the RDS button is pressed, the mode is changed as follows:

### **PS (Program Service Name)**

When you select PS, "PS" is displayed, and in 4 seconds, the program service name will be displayed. If there is no PS data in the station, the frequency will be displayed.

### **PTY (Program Type)**

When you select PTY with the RDS MODE button, "PTY" will blink for about 4 seconds. After 4 seconds, the type of received PTY will be displayed.

### **CT (Clock Time)**

When you select CT with the RDS MODE button, "CT" will blink for about 4 seconds. After 4 seconds, the clock time will be displayed.

### **RT**

When you select RT with the RDS button, "RT" will blink for about 4 second.  
After 4 seconds, the data of received RT will be displayed.  
If there is no RT data among received broadcasting, RDS mode will be automatically switched to PS mode.

## ***PTY***

### **PTY search**

A station can be searched by this function.

#### **1 Press the RDS button for more than 1.5 seconds.**

Then "PTY SEARCH" will be shown in the display.

#### **2 Press the PRESET UP/DOWN button to select to desired PTY mode. (The program will blink.)**

#### **3 Press the TUNING button. (PTY search be ready)**

When the PTY mode that you have selected is searched, PTY search will stop and the PTY mode will be displayed.  
If the same program type is not found during PTY Search, it will stop at the beginning frequency.  
If you want to cancel PTY search while searching, press the RDS button. PTY search will stop and search mode will be released automatically.

## ***RDS (PTY)***

NEWS	:brief announcements, events, public opinion, reports, actual situations.
AFFAIRS	:a kind of suggestion including practical announcements other than news, documents, discussion, analysis and so on.
INFO	:daily information or reference such as weather forecast, consumer guide, medical assistance and so on.
SPORT	:sports related programs.
EDUCATE	:educational and cultural information.
DRAMA	:all kinds of radio concert and serial drama.
CULTURE	:all aspects of national or local culture including religious events, philosophy, social science, language, theatre, and so on.
SCIENCE	:programs on natural science and technology
VARIED	:popular programs such as quiz, entertainment, private interview, comedy, satire and so on.
POP M	:program on commercial, practical and popular songs, and sale volume of discs, etc.
ROCK M	:practical modern music generally composed and played by young musicians.
EASY M	:popular music usually lasting for less than 5 minutes.
LIGHT M	:classical music, instrumental music, chorus, and light music favored by non-professionals.
CLASSICS	:orchestra including great operas, symphony, chamber music and so on.
OTHER M	:other music styles(Rhythm & Blues, Reggae, etc.)
WEATHER	:weather reports, forecast
FINANCE	:financial reports, commerce, trading
CHILDREN	:children's programs
SOCIAL	:social affairs
RELIGION	:religious programs
PHONE IN	:program in which the public expresses its view by phone.
TRAVEL	:travel reports
LEISURE	:programs concerning recreational activities
JAZZ	:jazz music
COUNTRY	:country music
NATION	:national music
OLDIES	:music from the so-called golden of popular music
FOLK M	:folk music
DOCUMENT	:documentaries
TEST	
ALARM !	:a program notifying an emergency or a natural disaster.



## Video Operations

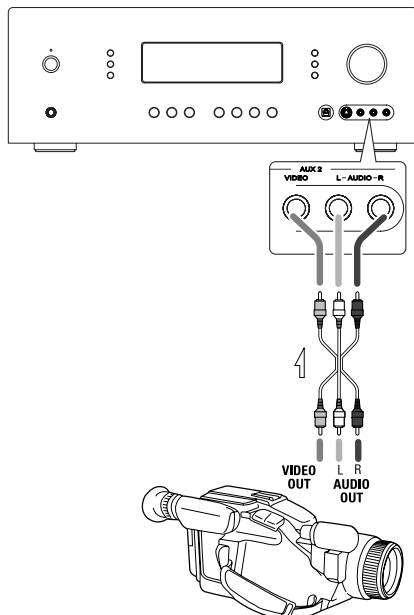
### Playing Video Sources

**Note:**

When playing videos that feature surround sound, refer to "Available Surround Modes".

- 1** Select the **DVD, VIDEO 1, VIDEO 2, AUX 1, AUX 2** mode by pressing the **SOURCE(▲/▼)** button
- 2** Play the component corresponding to the **FUNCTION** selected.
- 3** The picture from the video source can be seen on the **TV** and the sound from the video source will be heard from the speakers.

#### Video Camera Connections



VCR, Video Camera Recorder, etc.

Connect the video camera recorder's AUDIO OUTPUT to the AUDIO (L)/(R) jacks and VIDEO OUT to the VIDEO jack of the AUX 2 INPUT.

### Video Tape Dubbing

- 1** Press the **SOURCE(▲/▼)** button to select the **VIDEO** source to be recorded.
- 2** Playback the source.
- 3** Operate **VID 1** or **VID 2/VCR** for recording.

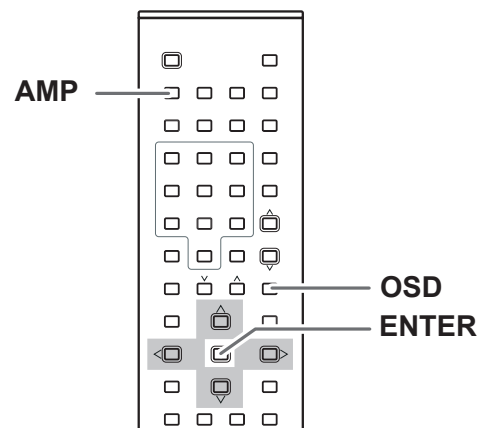
Video/audio signals from the selected VIDEO source can be dubbed to VID 2/VCR only.

## System Configuration (OSD - On Screen Display)

Before using the unit, you will probably want to change the settings for most inputs so that they are properly configured to reflect the use of digital or analog inputs, the type of speakers installed and the surround mode specifics of your home theater system. Remember that since the LR-8500 memorizes the settings for each input individually, you will need to make these adjustments for each input used. However, once they are made, further adjustment is only required when system components are changed.

### Making Configuration Adjustments

- 1** If another function is selected, press the **AMP** button.
- 2** Press the **OSD** button.  
The MAIN MENU will appear, and adjustments are made from the individual menus. The menu will remain on the screen for 20 seconds.
- 3** Select an item you want to change using the **▲/▼** buttons.
- 4** Press the **ENTER** button.
- 5** Press the **►** button repeatedly until the setting you want to select appears.



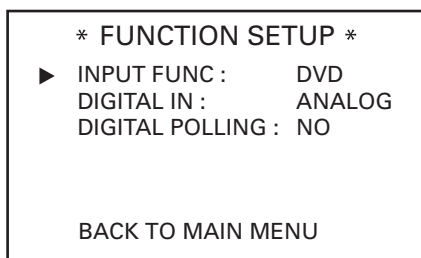
**2**

**\*\* MAIN MENU \*\***

► FUNCTION	SETUP
SURROUND	SETUP
SPEAKER	SETUP
DISTANCE	ADJUST
CH LEVEL	ADJUST
PREFERENCE	SETUP
ZONE II	SETUP
ROOM AUTO	SETUP

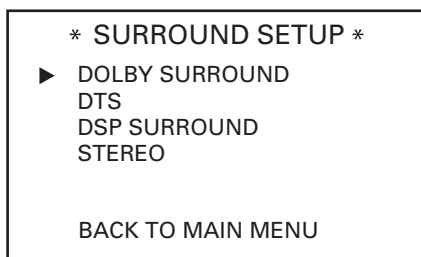
## System Configuration

### A FUNCTION SETUP



You can select associate one of the digital inputs with the selected input source. Some digital video input sources, such as a cable box or HDTV set-top, may change between analog and digital outputs, depending on which channel is in use. The LR-8500's Auto Polling feature allows you to avoid losing the audio feed when this happens by permitting both analog and digital connections to the same source on the unit. Digital audio is the default, and the unit will automatically switch to the analog audio if the digital audio stream stops.

### B SURROUND SETUP



#### Dolby Digital

Available only with digital input sources encoded with Dolby Digital data. It provides up to five separate main audio channels and a special dedicated low-frequency effects (LFE) channel.

#### Dolby Digital EX

Available when the receiver is configured for 6.1/7.1-channel operation, Dolby Digital EX is the latest version of Dolby Digital. When used with movies or other programs that have special encoding, Dolby Digital EX reproduces specially encoded soundtracks so that a full 6.1/7.1 sound field is available. When the receiver is set for 6.1/7.1 operation and a Dolby Digital signal is present, the EX mode is automatically selected. Even if specific EX encoding is not available to provide the additional channel, the special algorithms will derive a 6.1/7.1 output.

#### DTS 5.1

When the speaker configuration is set for 5.1-channel operation, the DTS 5.1 mode is available when DVD, audio-only music or laser discs encoded with DTS data are played. DTS 5.1 provides up to five separate main audio channels and a special dedicated low-frequency channel.

#### DTS-ES 6.1 Matrix, DTS-ES 6.1 Discrete

When the speaker configuration is set for 6.1/7.1 operation, playback of a DTS-encoded program source will automatically trigger the selection of one of the two DTS-ES modes. Newer discs with special DTS-ES discrete encoding will be decoded to provide six discrete, full-bandwidth channels plus a separate low-frequency channel. All other DTS discs will be decoded using the DTS-ES Matrix mode, which creates a 6.1-channel sound field from the original 5.1-channel soundtrack.

#### Dolby Pro Logic II (Movie, Music, Pro Logic)

Dolby Pro Logic II is the latest version of Dolby Laboratory's benchmark surround technology that decodes full-range, discrete left, center right, right surround and left surround channels from either matrix surround-encoded programs and conventional stereo sources when an analog input is in use. The Dolby Pro Logic II Movie mode is optimized for movie soundtracks, while the Pro Logic II Music mode should be used with musical selections. The Pro Logic mode activates original Pro Logic processing for those who prefer that presentation.

#### DTS Neo:6 Cinema, DTS Neo:6 Music

These two modes are available when any analog source is playing to create a six-channel surround presentation from conventional Matrix-encoded and traditional Stereo sources. Select the Cinema version of Neo:6 when a program with any type of analog Matrix surround encoding is present.

Select the Music version of Neo:6 for optimal processing when a nonencoded, two-channel stereo program is being played.

#### Dolby Virtual Speaker

Dolby Virtual Speaker uses advanced technology to simulate the sonic signature of a speaker location even when there is no speaker physically present in that location. The Reference ("REF") mode activates any missing speakers to simulate a 5.1 presentation with accurate localization.

The Wide mode virtualizes the locations of the front-channel speakers to create a wider image and a more enveloping sound field. It is available no matter how many speakers are present.

## System Configuration

### Theater

The Theater mode creates a sound field that resembles the acoustic feeling of a standard live-performance theater.

### Hall 1, Hall 2

The two Hall modes create sound fields that resemble a small (Hall 1) and medium-sized (Hall 2) concert hall.

### 5-Channel Stereo, 7-Channel Stereo

This mode takes advantage of multiple speakers to place a stereo signal at both the front and back of a room. Depending on whether the unit has been configured for either 5.1 or 6.1/7.1 operation, one of these modes, but not both, is available at any time. Ideal for playing music in situations such as a party, it places the same signal at the front-left and surround-left, and front-right and surround-right speakers.

The center channel is fed a summed mono mix of the in-phase material of the left and right channels.

### Stereo

This mode turns off all surround processing and presents the pure left- and right-channel presentation of two-channel stereo programs.

**PURE STEREO:** When Audio input is selected analog, the unit is in a "bypass" mode with no bass management.

**DSP STEREO:** When DSP Stereo is selected, the signal is digitized and bass management settings are applied.

### Dolby Headphone, DH 1, DH 2, DH 3

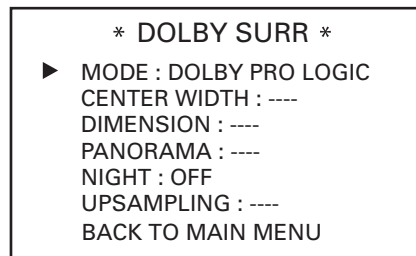
Dolby Headphone enables ordinary stereo headphones to portray the sound of a five-speaker surround-playback system. The DH1 mode creates a headphone presentation that resembles a small, well-damped room and is appropriate for use with both movies and music-only recordings. The DH2 mode creates a more acoustically live room particularly suited to music listening. The DH3 mode creates a larger room, more like a concert hall or movie theater.

The Bypass mode bypasses any Dolby Headphone processing.

For additional information on the specifics of surround modes and processing, information on Dolby modes may be found at [www.dolby.com/Consumer/Technologies](http://www.dolby.com/Consumer/Technologies), and information on DTS modes is available at [www.dtsonline.com/home&car/overview.php](http://www.dtsonline.com/home&car/overview.php).

### DOLBY SURROUND

When **DOLBY SURROUND** mode is selected, a menu will be shown.



The choices on this menu include the selection of the actual surround mode, the selection of rear channel post-processing when the system is configured for 7.1 operation, adjustments to the Night Mode when available with a Dolby Digital soundtrack, the adjustment of special parameters available when either Dolby Pro Logic II Music or Dolby Pro Logic IIx Music is selected as the surround mode and control over digital upsampling, when available.

• **Center Width:** This setting adjusts the balance of the vocal information in the front sound stage between the center and front left/right speakers. The lower settings spread the center channel sound more broadly into the left and right channels. A higher number (up to "7") produces a tighter center channel presentation.

• **Dimension:** This setting alters the perceived depth of the surround field by creating a shallower presentation that appears to move sounds toward the front of the room, or a deeper presentation that appears to move the center of the sound field toward the back of the room. The setting of "0" is a neutral default, with the range of adjustment shown as "R-3" for a deeper, rear-oriented sound.

• **Panorama:** Switch this setting on or off to add an enveloping wraparound presentation that increases the perception of sound along the sides of the room.

#### • NIGHT

**OFF:** When OFF is highlighted, the Night mode will not function.

**MID:** When MID is highlighted, a mild compression will be applied.

**MAX:** When MAX is highlighted, a more severe compression algorithm will be applied.

#### • UPSAMPLING

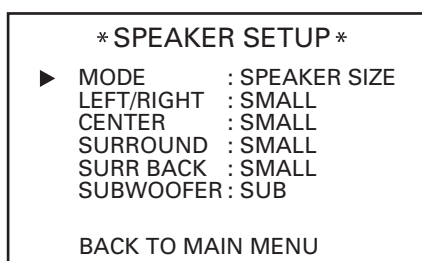
The setting to turn the unit's upsampling feature on or off.

## System Configuration

In normal use, this feature is turned off, which means that digital sources are processed at their native sample rate. For example, a 48kHz digital source will be processed at 48kHz. However, the LR-8500 allows you to upsample the incoming 48kHz signals to 96kHz for added resolution.

**NOTE:** This feature is only available for the Dolby Pro Logic II-Music, Dolby Pro Logic II-Movie, Dolby Pro Logic and Dolby 3 Stereo modes.

### ▣ SPEAKER SETUP



This menu allows you to switch the menu to change either the speaker size setting or the exact crossover point used for that speaker group. For the first pass through the menu, leave the setting at its default option of **SPEAKER SIZE**, and then proceed as outlined below. Once the speaker choices have been set, you may wish to return to this line to change the option so that the crossover settings may be adjusted.

#### • SPEAKER SIZE MODE

##### LEFT/RIGHT

**LARGE:** Select this when large front speakers are connected. Front channel materials are sent to the front speakers at full range. When this setting is selected, less bass signal is sent to the sub-woofer. Only use this setting if you have adequate sized bass drivers in your front speakers.

**SMALL:** Select this when the front speakers are rather small. When "SMALL" is selected, SUBWOOFER is set to "SUB" automatically, and bass frequencies of the front channels are output from a subwoofer. So a powered subwoofer is indispensable for this setting.

##### CENTER

**LARGE:** Select this when a large center speaker is connected. Center channel is output at full range.

**SMALL:** Select this when the center speaker is rather small. Bass frequencies are output from a subwoofer.

**NONE:** Select this when no center speaker is connected. The center channel will be output from front speakers.

### SURROUND

**LARGE:** Select this when an external power amplifier and large surround speakers are connected. Surround channels are output to the surround speakers at full range.

**SMALL:** Select this when the surround speakers are rather small. Bass frequencies are output from your powered subwoofer.

**NONE:** Select this when no surround speakers are connected.

### SURR BACK

**LARGE:** Select if the surround back speakers are large sized.

**SMALL:** Select if the surround back speakers are small sized.

**NONE:** Select if the surround back speakers are not connected.

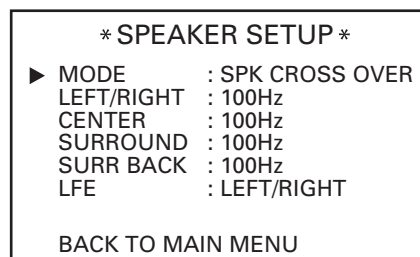
### SUBWOOFER

**LFE:** Select if a subwoofer is connected to the LR-8500, you have the option to have the front left/right "main" speakers reproduce bass frequencies at all times, and have the subwoofer operate only when the LR-8500 is being used with a digital source that contains a dedicated Low-Frequency Effects, or LFE, soundtrack. This allows you to take advantage of the special bass created for certain movies.

**LFE+FRONT:** Select if a subwoofer is connected and you wish to use it for bass reproduction in conjunction with the main front left/right speakers, regardless of the type of program source of Surround mode you are listening.

**NONE:** Select if no subwoofer is connected to this unit. All bass information will be routed to the front left/right speakers.

#### • SPEAKER CROSS OVER MODE



The factory default setting for all speaker positions is 100Hz. If that setting is acceptable for all channels, then

## System Configuration

no adjustments are needed and you may skip this section. However, should you wish to change one of the settings. The available choices at which point low-frequency information will be sent to the subwoofer, rather than to the main speaker channel, are 40Hz, 60Hz, 80Hz, 100Hz, 120Hz and 200Hz.

### **E** DISTANCE ADJUST

*DISTANCE ADJUST*			
▶ FL	: 3.0 M	SBR	: 3.0 M
CEN	: 3.0 M	SBL	: 3.0 M
FR	: 3.0 M	SL	: 3.0 M
SR	: 3.0 M	SUB	: 3.0 M
DELAY RESET : OFF			
UNIT : METER			
A / V SYNC DELAY : 0 mS			
BACK TO MAIN MENU			

Due to the different distances between the listening position and each speaker position, the amount of time it takes for sound to reach your ears from each channel is different. You may compensate for this difference through the use of the delay settings to adjust the timing for the speaker placement and acoustic conditions in your listening room or home theater.

#### NOTE

Once the DELAY ADJUST menu is on-screen, note that default for distance settings is in meter. If your measurements are not in meter, change to feet at the UNIT line.

### **F** CH LEVEL ADJUST

* CH LEVEL ADJUST *			
▶ FL	: 0dB	SBR	: 0dB
CEN	: 0dB	SBL	: 0dB
FR	: 0dB	SL	: 0dB
SR	: 0dB	SUB	: 0dB
LEVEL DEFAULT : OFF			
TEST TONE SEQ : AUTO			
TEST TONE : OFF			
BACK TO MAIN MENU			

Channel level adjustment is a key part of the configuration of any surround sound product. It is particularly important for a digital receiver such as the LR-8500, as correct outputs ensure that you hear soundtracks with proper directionality and intensity.

Listeners are often confused about the operation of the surround channels. While some assume that sound should always be coming from each speaker, most of the time

there will be little or no sound in the surround channels. This is because they are only used when a movie director or sound mixer specifically places sound there to create ambience or special effect, or to continue action from the front of the room to the rear. When the output levels are properly set, it is normal for surround speakers to operate only occasionally. Artificially increasing the volume to the rear speakers may destroy the illusion of an enveloping sound field that duplicates the way you hear sound in a movie theater or concert hall.

Before beginning the output level adjustment process, make certain that all speaker connections have been properly made. The system volume should be set to the level that you will use during a typical listening session

#### NOTE

You can adjust channel level by pressing the TEST TONE button on the remote control.

### **G** PREFERENCE SETUP

* PREFERENCE SETUP *	
▶ DISPLAY TIME OUT	: OFF
DISPLAY MODE	: FULL
VOLUME DEFAULT	: OFF
DEFAULT VOL SET	: -25dB
SEMI OSD TIME OUT	: 5
FULL OSD TIME OUT	: 20
DEFAULT SURR MODE	: ON
BACK TO MAIN MENU	

#### • DISPLAY TIME OUT

Select amount of time(3s~10s) that the display to fade out of front panel. Select OFF if you do not wish to the front panel displays fade out.

#### • DISPLAY MODE

FULL: Normal brightness.

HALF: Half the normal brightness level.

OFF: All of the front panel indicators will go dark.

#### • VOLUME DEFAULT

ON

OFF

#### • DEFAULT VOL SET

Set the desired turn-on volume. This setting may not be made with the regular volume controls.

#### • SEMI OSD TIME OUT

The semi-OSD system places one-line message at the

## System Configuration

video display screen whenever the volume, input source, surround mode, tuner frequency or any of the configuration settings are changed.

Set to change the length of time that the semi-OSD displays remain on the screen.

### • FULL OSD TIME OUT

The full-OSD menu system is used to simplify the setup and adjustment of the LR-8500, using a series of on screen menus. Set to change the length of time that full-OSD displays remain on the screen.

### • DEFAULT SURR MODE

ON: Select if you wish to leave the default so that the mode choice encoded in the disc is always used, no further action is needed. Simply leave the setting at the factory default of ON.

OFF: Select to set the unit so that it responds to the last surround mode used when a Dolby Digital or DTS source is playing.

### H ZONE II SETUP

\* ZONE II SETUP \*

▶ ZONE II : OFF

ZONE II IN : FM PRESET 01

ZONE II VOL : -25 dB

SB AMPS : SB SP

BACK TO MAIN MENU

Once the audio and IR link connections have been made, the LR-8500 needs to be configured for ZONE II operation.

• **ZONE II:** Select to turn the system on and off.

• **ZONE II IN:** Select to the desired input to the ZONE II SETUP

• **ZONE II VOL:** Press the ◀/▶ buttons until the desired volume level for the ZONE II SETUP is entered. Do not use the regular volume control knob for this setting.

• **SB AMPS:** To change the setting so that the Surround Back amplifiers are fed by the source selected through the ZONE II SETUP. Remember that once this setting is made, you will not be able to take advantage of any of the 6.1/7.1-channel decoding or processing modes, and that

the speakers used for the remote zone must be connected to the SURROUND BACK/ZONE II Speaker Outputs. The volume for these speakers is set by the ZONE II SETUP.

### I ROOM AUTO SETUP

The LR-8500 is one of the first receivers in its class to offer automated speaker setup and system calibration.

This process greatly simplifies the installation of your new receiver by using a series of test signals and the power of an advanced digital signal processing system to eliminate the need for manual adjustment of speaker "size", crossover, delay and output level settings. With ROOM AUTO SETUP your new receiver even alerts you to errors in speaker connections that prevent a speaker from functioning.

With ROOM AUTO SETUP you are able to calibrate your system in a fraction of the time it would take to enter the settings manually, and with results that rival those achieved with expensive test equipment and time-consuming procedures.

The end result is a system calibration profile that enables your new receiver to deliver the best possible sound, no matter what type of speakers you have or what the dimensions of your listening room.

We recommend that you take advantage of the precision of ROOM AUTO SETUP to calibrate your system, but if desire you may also make any of the configuration settings manually, or trim the settings provided by ROOM AUTO SETUP by following the instructions.

If you wish to configure your manually, or if for some reason your ROOM AUTO SETUP microphone is unavailable, you may still do so by following the instructions.

**Step 1:** ROOM AUTO SETUP requires that your listening room have as little background noise as possible to avoid interfering with the measurement of tones produced by your LR-8500 during the setup procedure. Turn off all loud fans, air conditioners and other equipment, and try to avoid making any noise during the process.

**Step 2:** The ROOM AUTO SETUP microphone should be placed in either your usual listening position or, if there is a large seating area, the center of the room, at the listeners' ear level. You may find it convenient to use a camera tripod for stable placement of the ROOM AUTO SETUP microphone at the correct height. The microphone includes a threaded insert on the bottom for tripod mounting.

**Step 3:** Plug the ROOM AUTO SETUP microphone into the LR-8500's Headphone Jack, making certain that the mini-plug to 1/4" phone plug adaptor supplied with the micro-



## System Configuration

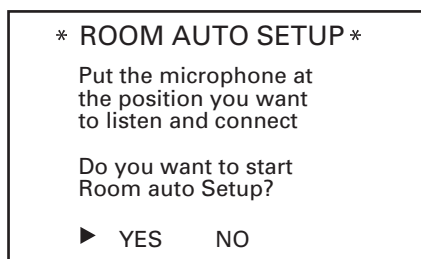
phone is firmly connected. The microphone cable is approximately 6 m long, which should accommodate most listening room situations.

If required, you may use an optional extension cable, available at most electronics stores, for use in larger rooms. However, we recommend that you avoid using extension cords for the microphone cable, as they may adversely affect the test results.

**Step 4:** Once the microphone is properly positioned and plugged in, proceed to the ROOM AUTO SETUP menus by first pressing the OSD Button to bring the MAIN MENU to the screen. Next, press the ▲/▼ Buttons to move the onscreen cursor to the ROOM AUTO SETUP menu line. Press the ENTER Button to move to the next screen.

**Step 5:** The first screen of the ROOM AUTO SETUP system will now appear to remind you to plug in the microphone.

If you have not already done so, plug the microphone into the Headphone Jack as described in steps 2 and 3. When you are ready to proceed, make certain that the cursor is pointing to YES and press the ENTER Button. If you do not wish to continue with the ROOM AUTO SETUP process, press the ◀/▶ Buttons and then press the ENTER Button to return to the MAIN MENU. Note that if you attempt to move to the next menu without plugging in the microphone, a reminder message will flash at the bottom of the screen.



**Step 6:** After entering YES to start the ROOM AUTO SETUP system, you will next see a brief warning message, and the screen will then change to the main ROOM AUTO SETUP menu.

The WARNING screen is a reminder that in order for the system to perform accurate measurements, it is important that the listening room be as quiet as possible. After 5 seconds, the screen will change again to display the main ROOM AUTO SETUP menu.

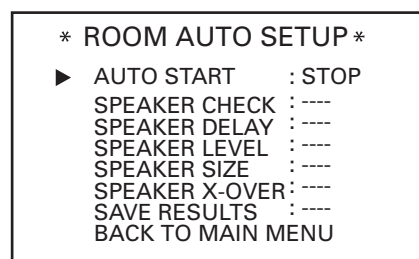
**IMPORTANT NOTE:** Anyone with hearing that is sensitive to loud noises should leave the room at this point, or use ear protection sufficient to reduce the noise level. Inexpensive foam-style ear plugs, available at most drug stores, may be used to reduce the sound level to a tolerable level. If you are uncomfortable with, or cannot tolerate, loud sounds and do not use some sort of ear protection, we strongly recommend that you leave the room and

ask someone else to run the ROOM AUTO SETUP process, or that you do not use ROOM AUTO SETUP and enter the configuration settings manually.

**Step 7:** The WARNING screen will automatically be replaced by the main ROOM AUTO SETUP menu.

While this screen is visible, you may start and stop the calibration process, or monitor the progress of the measurements and view the results. When the screen first appears, you will see AUTO START: STOP on the first line of the menu list. To start the ROOM AUTO SETUP test process, you must first tell the system how many speakers are in your system. To do that, choose one of these two options:

- If your system includes a full complement of seven main speakers (front left/center/front right/surround right/surround back right/surround back left/surround left) and a subwoofer, press the ◀/▶ Navigation Buttons so that 7.1 CH appears to the right of AUTO START, and then press the Set Button to start ROOM AUTO SETUP.
- If your system includes a traditional surround speaker complement of five main speakers (front left/center/front right/surround right/surround left) and a subwoofer, press the ◀/▶ Buttons so that 5.1 CH appears to the right of AUTO START, and then press the Set Button to start ROOM AUTO SETUP. To stop the calibration process at any time, press the ▲/▼ Buttons to move the on-screen cursors to the AUTO START line; press the ◀/▶ Navigation Buttons.



**Step 8:** Once ROOM AUTO SETUP has been started, you will hear test signals circulate among all of the speakers as the system sets the master level, checks to see where there are speakers, sets the distance measurement and calculates delay time settings, sets the speaker "size", and sets the speaker crossover point. During the measurement and calibration process, you may observe the progress of the testing by reading the messages that appear in the second line of the menu listing. When the ROOM AUTO SETUP screen first appears, it contains a series of dashes, but as the test and measurement proceeds, you will see the following messages as the individual measurements are taken:

- System Level: ADJUST VOLUME message will appear to indicate that the system is setting the overall volume level to the proper level as a prelude to testing the individual channels.

## System Configuration

During this test, you will see a message in the last line of the menu screen change as the volume level is adjusted.

- **Speaker Check:** The system will circulate a test signal to determine which channels have a speaker connected. During this test, you will see the name of each channel position displayed while a signal is sent to that speaker.

**NOTE:** While this test detects whether a speaker is connected to a particular output, it cannot determine whether the speaker is in the correct position. (For example, it can tell whether a speaker is connected to the Surround Right output, but it cannot tell whether the speaker is on the right or left side of your listening room.) For that reason, we strongly recommend that you try to listen as the tone circulates, matching the name shown for each channel to the location of the speaker. If a tone is heard from a speaker position that does not match the on-screen message, stop ROOM AUTO SETUP, exit the menus, turn your receiver off and check for proper speaker connections on the rear panel before resuming the setup.

When this test is complete, YES will be shown to the right of SPEAKER CHECK on the menu screen.

- **Speaker Delay:** This test will circulate the tones again as the name of each channel is shown to measure the distance from the microphone to each speaker. The results of these tests will be used to set the delay time settings for each active speaker position. When this test is complete, a speaker-to-microphone (listening position) distance will be shown to the right of SPEAKER DELAY line on the menu screen.
- **Speaker Level:** This test circulates a test signal and measures the output from each active speaker position. The results of the measurements are used to adjust the individual channel outputs as needed, so that they are identical. This is an essential element of ensuring that surround sound fields are properly reproduced. If desired, you may use the results of the automated testing as a baseline and then make manual adjustments to trim the output levels to your personal taste. When this test is complete, an output level adjustment number will be shown to the right of SPEAKER LEVEL line on the menu screen.
- **Speaker Size:** The measurements and calculations for this test take place at the same time as the test signals are circulated to calculate the output levels, and they are used to determine whether the speakers in your system are "large" or "small" for the purposes of bass management. (If desired, you may use the results of the automated testing as a baseline and then make manual adjustments to the speaker size settings on a source-independent basis. When this test is complete, an output level adjustment number will be shown to the right of the SPEAKER SIZE line on the menu screen.
- **Speaker Crossover:** The measurements and calculations for this test take place at the same time as the test signal is circulated to calculate the levels, and they are used to determine the crossover setting for each speaker in your system to create a seamless transition between the frequencies sent to your main speakers and subwoofer (if available). If desired, you may use the results of the auto-

mated testing as a baseline and then make manual adjustments to the crossover settings on a source-independent basis. When this test is complete, a crossover frequency will be shown to the right of the SPEAKER X-OVER line on the menu screen.

**Step 9:** When all measurements are successfully completed, the test signals will stop and a TEST DONE - UNPLUG MIC message will appear in the second line of the on-screen menu listings.

Unplug the microphone and store it in a safe place so that it is available to recalibrate your system if needed due to a change in speakers, preferred listening position, or a major change in the room's furnishings (such as the addition of thick carpeting or plush furniture) that might require different settings. To enter the settings to the receiver's memory and return to the Master Menu, press the ▲/▼ Buttons so that the on-screen cursor is pointing to RETURN TO MAIN MENU.

**NOTE:** If you wish to check the test results before exiting the ROOM AUTO SETUP menu, press the ▲/▼ Buttons that the on-screen cursor is at the second line of the menu listings, and then press the ◀/▶ Buttons to scroll through the list of speaker positions. The data on each line will also be entered into the listings on the individual SPEAKER SETUP, DELAY ADJUST and CHANNEL ADJUST menus once you exit ROOM AUTO SETUP.

**Step 10:** If the measurements are not successful due to a missing or malfunctioning speaker, an ERROR message and menu will appear.

The ROOM AUTO SETUP system is programmed to look for speaker pairs at the front left/front right, surround left/surround right and surround back left/surround back right positions. If the tests to any of those three channel pairs indicates that one, but not both of the speakers in the pair is present, the menu will show NONE next to the speaker position where the tests did not report back that a speaker is present. Should this message appear, make note of the suspect speaker location, exit all menus and turn the receiver off.

Check all speaker wire connections and then rerun ROOM AUTO SETUP.

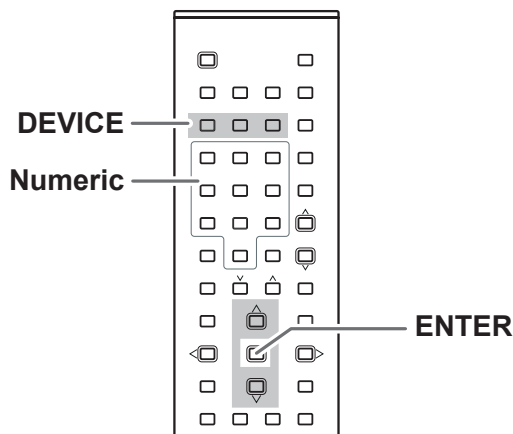
* ERROR *			
FL	: YES	SBR	: YES
CEN	: YES	SBL	: YES
FR	: YES	SL	: YES
SR	: NONE	SUB	: YES
Please check speaker or connections.			
▶ BACK TO MAIN MENU			

When you have successfully completed the ROOM AUTO SETUP process and made any needed adjustments to the input and surround mode configurations, your receiver is ready for use. If you do not wish to make any manual adjustments to the settings, you may skip the rest of this section and proceed to the Basic Operation section of this manual to learn how to operate LR-8500. For those situations where you may wish to make a change to the settings entered by ROOM AUTO SETUP.



## Controlling other Components Connected to the LR-8500

The LR-8500 is equipped with a powerful remote control not only receiver's functions, but also most popular brands of audio and video equipment, including CD players, cassette decks, TV sets, cable boxes, VCRs, satellite receivers and other home theater equipment.



### ⓑ Manual Search Method

- 1 Turn on the unit that you wish to include in the LR-8500 remote controller.
- 2 Press the DEVICE button (VCR, SAT, TV) and the ENTER button at the same time for 2 seconds until the SEND/LEARN indicator blinks twice.
- 3 Press the ▲ or ▼ button. Each press will send out a series of codes from the remote's built-in database.
- 4 When the unit being programed turns off, press the ENTER button.  
(Correct input: SEND/LEARN indicator blinks fourth.  
Incorrect input: SEND/LEARN indicator blinks once.)

### ⓒ Code Check Method

Check if enter the 3-digit code number directly.

- 1 While holding down the DEVICE button, press the ENTER button for 2 seconds and then release both buttons and then the SEND/LEARN indicator blinks twice.
- 2 Press the DIGITAL button.
- 3 The 3-digit code number blinks in order.  
Example: If you enter '105'  
1. 1: Indicator blinks once.  
2. 0: Indicator blinks tenth.  
3. 5: Indicator blinks fifth.

## Learning a Pre-programming Code

By following one of the methods below, you may program the remote to operate a wide range of devices from other manufacturers.

### Ⓐ Direct Code Entry Method

- 1 Find the 3-digit number for the brand name of the component that you want to operate in the code list following pages. (See 34 page.)
- 2 Turn on the component that you want to operate.
- 3 While holding down the DEVICE button on the remote controller that you want to program, press the ENTER button for 2 seconds, and then release both buttons.  
Then the SEND/LEARN indicator blinks twice.
- 4 Within 10 seconds, enter the 3-digit code number.  
(Correct input: SEND/LEARN indicator blinks fourth.  
Incorrect input: SEND/LEARN indicator blinks once.)
- 5 If the component does not operate properly, return to step 3 and repeat the steps above.

## Programming the Remote

### VCR Brand List

Brand	CODE No.					Brand	CODE No.				
AKAI	033	042	022	052	032	JENSEN	042				
ALBA	008	020				JVC	042	056	030	052	
AMSTRAD	011					KENWOOD	005	042			
ANITSCH	009					KRIESLER	045	031			
ARC EN CIEL	042	056	052			KUBA	043				
ARISTONA	045	031				LLOYD	011				
ASA	018					LOEWE OPTA	014	018	029	031	
AWIA	011	042				LOGIK	008	027			
BAIRD	042	033				LUXOR	033	038			
BAUER. BOSCH	014	043				MAGNADYNE	041				
BLAUPUNKT	014	043	055	031	054	MAGNASONIC	038				
	040					MAGNAVOX	019				
BRANDT						MARANTZ	004	014	046	018	031
ELECTRONIQUE	042	056	052			MATUI	010	025	027		
BRIONVEGA	041					MEMOREX	000	003	005	011	045
BUSH	008	020				METZ	014	043	031	054	037
C.EDISON	041					MGA	017				
CANON	014					MINERVA	055	054			
CAPEHART	020					MINOLTA	006	007			
CGE	011	042	052			MITSUBISHI	017	049			
CONTINENTAL						MTC	011	013			
EDISON	042	056	052			MULTITECH	008	011			
CRAIG	000	013				MURPHY	011				
CURTIS MATHES	019					NAONIS	042	056	052		
DAEWOO	001	020	021			NATIONAL	040				
DAYTRON	020					NEC	004	042	052		
DECCA	011	042				NECKERMANN	002	041	014	042	052
DEGRAAF	003	006	011	045	018	NOGAMATIC	042	056	052		
DUAL	042	052				NOKIA	003	005	041	042	056
DUMONT	003	011	018				050	052	033	038	
DYNATECH	011					NORDMENDE	039	042	056	052	053
EMERSON	002	010	011	019	025		035				
FERGUSON	042	036	030	052	034	OPTONICA	045	046			
FIDELITY	011					ORION	002	010	025	027	
FINLANDIA	003	018				OSAKI	011				
FINLUX	003	006	011	018		OTTO VERAND	043				
FISHER	000	003	005			P. CINEMA	014				
FUNAI	011					PALLADIUM	041	014			
GE	019					PANASONIC	023	051	040		
GENERAL	014					PATHE MARCONI	042	056	052		
GOLDSTAR	004					PENTAX	006	007			
GOODMANS	008	011	046			PERDIO	011				
GRAETZ	041	042	056	050	052	PHILIPS	012	014	045	046	018
	038						029	031			
GRANADA	003	005	018			PHONOLA	014	045	018	029	031
GRUNDIG	014	043	018	055	031	PORTLAND	020				
	053	054				PROLINE	011				
HANSEATIC	043					PYE	014	045	018	029	031
HARMAN-KARDON	004					QUARTZ	005				
HIFIVOX	042	056	052			QUELLE	002	044	054		
HINARI	002	008	024	027		RADIOLA	045	031			
HITACHI	006	007	011	042		RADIOMARELLI	041				
IMPERIAL	011					RCA	019				
INGELEN	042	056	052	038		REALISTIC	000	003	005	011	013
INGERSOL	027						045	046			
ITT	005	041	042	056	050	REX	042	056	052		
	052	033	038			SABA	039	042	056	052	035

## Programming the Remote

### VCR Brand List

Brand	CODE No.				
SAISHO	002	010	025	027	
SALORA	005	017			
SAMSUNG	013	019	032		
SANSUI	042				
SANYO	000	003	005	025	038
SBR	018	029			
SCHAUB LORENZ	041	042	056	050	052
	038				
SCHNEIDER	008	011	045	031	
SEI-SINUDYNE	027				
SELECO	042	056	052		
SENTRA	020				
SHARP	045	046	105	048	
SHINTOM	008				
SIEMENS	014	043	055	031	054
	038				
SIERA	045	031			
SINUDYNE	027				
SONY	044	015	016	026	028
STERN	042	056	052		
STS	006				
SUNKAI	025				
SYLVANIA	011	017			
SYMPHONIC	011	017			
TASHIKO	011				
TATUNG	011	042			
TEAC	011	042			
TEKNIKA	011				
TELEAVIA	042	056	052		
TELEFUNKEN	042	056	052		
TENOSAL	008				
THOMSON	042	056	052		
THORN- FERGUSON	039	042	030	052	
	034	036			
TOSHIBA	001	042	056	017	
	052				
TOTELEVISION	013				
UHER	042				
ULTRA VOX	041				
UNITECH	013				
UNIVERSUM	041	014	043		
URANYA	041				
VECTOR	004				
VICTOR	042				
VIDITAL	041				
WESTING HOUSE	041				
WARDS	019				
YAMAHA	004	042			
ZANUSSI	042	056	052		
ZENDER	052				
ZOPPAS	042	056			

### SAT Brand List

Brand	CODE No.				
ALBA	030				
AMSTRAD	008	019	027		
ARCON	021				
ARISTONA	016				
ASTRA	028				
BLAUPUNKT	033				
BUSH	016				
CH.MASTER	030				
CITY COM	005				
DDC	030				
DYNASAT	005				
ECHOSTAR	002	009	032	020	
EMME ESSE	005				
FAIT	005				
FERGUSON	014		016	017	018
FINLUX	006	007	013		
FRACARRO	005				
FTE	022				
GOLDSTAR	004	021			
GRAETZ	026	037			
GROTHUSEN	004				
GRUNDIG	033	016	018	036	
HINARI	030				
HIRSCHMANN	003	006			
HITACHI	013				
INGELEN	026	037			
ITT	034				
ITT-NOKIA	032	018	026	037	
JERROLD		014			
KATHREIN	005	022	023		
KOSMOS	004				
KRIESLER	016				
LENCO	004	021			
LUXOR	026	037			
MAGAI	022				
MARANTZ	012				
MASPRO	016				
MATSUSHITA	000				
METZ	036				
MINERVA	036				
MULTISTAR	022				
MURATO	004				
NEC					
NEIRU	021				
NOKIA	026	037			
NORSAT	015				
PACE	001	016	017	018	
PANASONIC	032				

## Programming the Remote

### SAT Brand List

Brand	CODE No.			
PHILIPS	003	011	012	029
PHONOLA	016			
PROSAT	030			
PYE	016			
QUADRAL	030			
QUELLE	036			
RADIOLA	016			
REDIFFUSION	015			
SABA	035			
SALORA	026			
SAMSUNG	003	022		
SAT PARTNER	004			
SATPORTNER	021			
SCHAUB LORENZ	026	037		
SCHNEIDER	005	016		
SIEMENS	033	036		
SIERA	016			
SILVA	004	021		
SKY				
STARCOM				
STARSAT	022			
TECHNISAT	003			
TELEFUNKEN	025			
TELESYSTEM	005			
THORN- FERGUSON	010	014	016	017
	018			
TRIAD	004			
UNIDEN	022			
UNITED CABLE				
V TECHNOLOGY	004			
VORTEC	003	024	025	
ZENDER	022			

### TV Brand List

Brand	CODE No.				
ADMIRAL	050	134			
AKAI	093	049	123		
ALBA	068				
ALBIRAL	116				
ALCATEL	022				
AMSTRAD	021				
ANAM	000				
ARC EN CIEL	028	039	043	145	081
ARISTONA	099	049	050	019	142
	149	078			
ARTHUR MARTIN	053	139	117	120	122
	123	125	128		
ASA	050	055	057	113	134
ATLANTIC	099	111			
AUDIOSONIC	054				
AUSIND	053				
AUTOVOX	099	144	055	019	057
	069				
BAIRD	083				
BASICLINE	006				
BAUR	011				
BEKO	023	049			
BLAUPUNKT	094	100	102	111	114
BRANDT	028	039	040	043	145
	081				
BRION VEGA	050				
BRUNS	048	050			
BSR	059	110	132		
BUSH	033	068	124	074	
CENTURY	098	101	050	079	136
CGE	016	101	124	079	132
	136				
CIHAN	065				
CLARIVOX	048	116			
CONDOR	099	111			
CONTEC	087				
CONTINENTAL					
EDITION	028	039	040	043	145
	081				
CROSLEY	101	050	109		
CROWN	147				
CTC CLATRONIC	046				
DAEWOO	089				
DECCA	099	060	063	115	118
DEGRAAF	036				
DIXI	049	090			
DRYNATRON	049				
DUAL	099	141			
DUAL-TEC	096	099	132		
DUMONT	046	050	057	073	
ELBE		016	116		
ELBIT	065				
ELCIT	046	097	103	050	109
	127	132			
ELMAN	046	132			
ELTA	090				
EMERSON	098	050			

## Programming the Remote

### TV Brand List

Brand	CODE No.					Brand	CODE No.				
ERRES	049	142				KAISUI	006				
EUROPHON	098	046	097	099	051	KARCHER	006				
	115	132				KENDO	098				
FERGUSON	146	040	041	150	057	KENNEDY	144	019	109		
	061	116	149			KORTING	050	059	111		
FIDELITY	099	149				KRIESLER	099	049	050	019	142
FINLUX	034	046	053	055	057		149	078			
	109	113	073	074	079	LENOIR	099				
FISHER	015	048	050	052	109	LOEWE OPTA	008	097	047	049	050
	136						115	072			
FORGESTONE	149					LOGIK	118	149			
FORMENTI	099	053	109	111	125	LUMA	049	120	134		
FORTRESS	137					LUXOR	058	139	117	120	123
FRABA	075						129	135	083		
FRONTECH	054					MAGNADYNE	046	097	103	050	109
FUJITSU	025						115	127	132		
FUNAI	054	059				MAGNAFON	046	097	099	051	053
GBC	109	132					115				
GEC	099	060	109	115	134	MARANTZ	049				
	088					MATSUI	090	099	106	060	118
GELOSO	103	109	132	134	090		068	134			
GOLDSTAR	092	003	017	099	049	McMICHAEL	088				
	075	076	077	090		MEMOREX	090				
GOODMANS	033	049	060	077		METZ	094	050	114	133	
GORENJE	066	136				MINERVA	094	100	057	058	114
GREATZ	001	058	109	122	123	MISTRAL	149				
	128	129	130	134		MITSUBISHI	033	035	047	049	050
GRANADA	033	099	049	058	060		062	118	119	148	080
	142	115	125	134			138				
GRUNDIG	094	100	057	058	108	MIVAR	097	099	115	077	
	112	114	082			MULTITECH	046	099	115	136	
HANSEATIC	033	047	099	049	109	MURPHY	134				
	139	111				MAONIS	096	144	019	110	134
HANTAREX	097					NATIONAL	042	104	109		
HEMMERMANN	127					NEC	033	085			
HIFIVOX	028	039	043	145	081	NECKERMANN	099	050	139	120	136
HINARI	033	045	143	090		NEI	049				
HITACHI	014	033	034	036	099	NIKKAI	060				
	145	056	109	139	110	NOBLEX	015				
	067	117	132	134	084	NOBLIKO	098	046	099	053	057
	091	081	088			NOGAMATIC	028	039	043	145	081
	093	099				NOKIA	001	140	058	105	109
HYPER	016	101	124	079	132		122	123	128	148	129
IMPERIAL	133						130	134	135	083	089
						NORDMENDE	028	032	039	043	145
INGELEN	001	058	109	122	128		131	091	081		
	129	130	134				109	064	123		
INNO HIT	093	098	097	099	143	OCEANIC	099				
	077	090				ONCEAS	137				
INTERFUNK	047	049	050	145	058	OPTONICA	090	059	118	068	127
	109	142	123	128	129	ORION	060				
	091					OSAKI	077				
IRRADIO	093	143	053	077	090	OSIO	087				
ITT	001	140	058	105	109	OSUME	033	047	049	109	139
	122	123	128	148	129	OTTO VERSAND	065				
	130	134	135	083	089	P.T ACTTRON	099	053			
JVC	033					PAEL	030	042	095	104	107
KTV	099					PANASONIC					

## Programming the Remote

### TV Brand List

Brand	CODE No.					Brand	CODE No.				
PATHE CINEMA	109	121	126			SELECO	016	096	144	019	141
PERDIO	099	111	116	132			110	069	134		
PHILCO	060					SHARP	033	087	137		
	016	030	101	050	109	SIAREM	046	097	050	109	115
	124	079	132	136		SICATEL	116				
PHILIPS	009	010	013	018	024	SIEMENS	005	094	036	100	111
	099	049	050	019	142		114	087			
	148	149	078	088		SIERA	099	049	050	019	142
PHOENIX	099	053	109	111	125		149	078			
PHONOLA	099	049	050	019	142	SILVER	054				
	149	078				SINGER	016	046	050	109	
PIONEER	020	049	145	091		SINUDYNE	127	046	050	059	109
PRANDONI-						SONOKO	049	090			
PRINCE	098	097	053	115	134	SONY	146	007	027	033	038
PREMIER	124						118				
PRINCE	098	097	053	134		STERN	096	144	019	110	069
PROTECH	049	054					134				
PYE	099	049	050	019	142	TANDBERG	133				
	148	149	078			TANDY	099	060	137		
QUASAR	046	097	051	053	077	TASHIKO	002	033			
QUELLE	047	099	100	049	053	TATUNG	099	060	063	065	115
	055	057	058	111	112		118				
	113	114	118	123	073	TEC	096	099	132		
	074	128				TELEAVIA	028	039	040	043	145
RADIOLA	099	049	050	019	142		091	081			
	149	078				TELEFUNKEN	028	041	145	150	086
RADIOMARELLI	046	097	103	050	109		091				
	062	127	132			TELETECH	090				
RANK	074					TELEVIDEON	099	053	109	111	125
RBM	074					TENSAI	049				
REDIFFUSION	062	123	134			THOMSON	012	028	032	039	040
REX	096	144	019	141	110		043	145	091	081	
	069	134				THORN-					
ROBOTRON	048	050				FERGUSON	014	040	041	054	150
RTF	048	050					057	061	116	149	086
SABA	028	031	032	037	039	TOCOM	029				
	040	043	097	050	145	TOSHIBA	004	016	033	070	074
	115	120	086	091	081	TRANS					
SAISHO	090	099	118	119	068	CONTINENTS	098	097	053	134	
SALORA	053	139	117	120	122	UHER	052	111	125		
	123	125	128	135	083	ULTRA VOX	098	046	099	050	109
SAMBERS	046	097	051	053	115		120				
	077					UNIVERSUM	092	034	054	077	
SAMPO	121					UNIVOX	116				
SAMSUNG	015	026	099	054	077	VEGAVOX	079				
	136	090				VOXSON	050	134			
SANYO	001	002	005	033	044	WATSON	111				
	048	060	113	118	071	WATT RADIO	046	099	051	109	116
	054		136				127				
SBR	049	142	148	149	088	WEGA	033				
SCHAUB LORENZ	001	058	109	122	123	WHITE					
	128	129	130	134		WESTINGHOUSE	099	111			
SCHNEIDER	096	099	049	050	052	YOKO	099				
	019	141	109	142	125	ZANUSSI	096	144	019	110	069
	149	078	132				134				
SEG	046					ZOPPAS	096	144	019	110	134
SEI	059										

## Troubleshooting

SYMPTOM	CAUSE	SOLUTION
Unit does not function when Main Power Switch is pushed	<ul style="list-style-type: none"> <li>No AC power</li> </ul>	<ul style="list-style-type: none"> <li>Make certain AC power cord is plugged into a live outlet.</li> <li>Check to see whether outlet is switch-controlled.</li> </ul>
Display lights, but no sound or picture	<ul style="list-style-type: none"> <li>Intermittent input connections</li> <li>Mute is on</li> <li>Volume control is down</li> </ul>	<ul style="list-style-type: none"> <li>Make certain that all input and speaker connections are secure.</li> <li>Press Mute Button.</li> <li>Turn up volume control.</li> </ul>
Unit turns on, but front-panel display does not light up	<ul style="list-style-type: none"> <li>Display brightness is turned off</li> </ul>	<ul style="list-style-type: none"> <li>Follow the instructions in the Display Mode (29 page) so that the display is set to FULL.</li> </ul>
No sound from any speaker; light around power switch is red	<ul style="list-style-type: none"> <li>Amplifier is in protection mode due to possible short</li> <li>Amplifier is in protection mode due to internal problems</li> </ul>	<ul style="list-style-type: none"> <li>Check speaker wire connections for shorts at receiver and speaker ends.</li> <li>Contact your local LUXMAN service center.</li> </ul>
No sound from surround or center speakers	<ul style="list-style-type: none"> <li>Incorrect surround mode</li> <li>Input is monaural</li> <li>Incorrect configuration</li> <li>Stereo or Mono program material</li> </ul>	<ul style="list-style-type: none"> <li>Select a mode other than Stereo.</li> <li>There is no surround information from mono sources.</li> <li>Check speaker mode configuration.</li> <li>The surround decoder may not create center- or rear-channel information from nonencoded programs.</li> </ul>
Unit does not respond to remote commands	<ul style="list-style-type: none"> <li>Weak batteries in remote</li> <li>Wrong device selected</li> <li>Remote sensor is obscured</li> </ul>	<ul style="list-style-type: none"> <li>Change remote batteries.</li> <li>Press the FUNCTION buttons.</li> <li>Make certain front-panel sensor is visible to remote, or connect remote sensor.</li> </ul>
Intermittent buzzing in tuner	<ul style="list-style-type: none"> <li>Local interference</li> </ul>	<ul style="list-style-type: none"> <li>Move unit or antenna away from computers, fluorescent lights, motors or other electrical appliances.</li> </ul>
Letters flash in the channel indicator display and digital audio stops	<ul style="list-style-type: none"> <li>Digital audio feed paused</li> </ul>	<ul style="list-style-type: none"> <li>Resume play for DVD.</li> <li>Check that Digital Input is selected.</li> </ul>

## Specifications

### Amplifier Section

#### Output Power

Power Output (20 Hz - 20 kHz, THD<0.07%, 8 ohms)

Front L&R	110 W / Ch
Center	110W / Ch
Surround L & R	110 W / Ch
Surround Back	110 W / Ch

Power Output (EIAJ, 1 kHz, 8 ohms)

Front L&R	140 W / Ch
Center	140 W / Ch
Surround L & R	140 W / Ch
Surround Back	140 W / Ch

Input Sensitivity/Impedance

Linear (High-Level) 240mV/47k ohms

Signal-to-Noise Ratio (IHF-A) 95dB

Surround System Adjacent Channel Separation

Pro Logic	40dB
Dolby Digital (AC-3)	55dB
DTS	55dB

Frequency Response

@ 1W (+0dB, -3dB) 10Hz - 100kHz

Tone Control:

BASS:  $\pm 10$  dB at 100 Hz  
TREBLE:  $\pm 10$  dB at 10 kHz

### Digital Audio Section

Sampling Frequency: 32 kHz, 44.1 kHz, 48 kHz, 96 kHz

DIGITAL Input Level/Impedance:

OPTICAL : -15 dBm — -21 dBm  
COAXIAL : 0.5 Vp-p / 75 ohms

### FM Tuner Section

(Without notes 100.1 MHz, 65 dBf)

Tuning Range:

87.5 MHz – 108.0 MHz (50 kHz steps)

Usable Sensitivity (IHF):

Mono : 11.2 dBf

50 dB Quieting Sensitivity:

Mono : 18.3 dBf

Stereo: 38.5 dBf

Capture Ratio: 2.0 dB

Image Rejection Ratio: 80 dB

AM Suppression Ratio: 55 dB

Total Harmonic Distortion (1 kHz):

Mono : 0.2%

Stereo: 0.3%

Frequency Response: 15 Hz – 16 kHz, +1/ -1.5 dB

Stereo Separation (1 kHz): 40 dB

Signal-to-Noise Ratio:

Mono : 70 dB

Stereo: 68 dB

### AM Tuner Section

Tuning Range: 522 kHz – 1,620 kHz (9 kHz steps)

Usable Sensitivity: 55 dB/m

Total Harmonic Distortion: 0.8%

Signal-to-Noise Ratio: 40 dB

### Video Section

Television Format : PAL / NTSC

Input Level/Impedance : 1Vp-p/75 ohms

Output Level/Impedance : 1Vp-p/75 ohms

Video Frequency Response  
(Composite and S-Video) : 10Hz-5.8MHz (-1dB)

Video Frequency Response  
(Component Video) : 10Hz-50MHz (-3dB)

### General

Power Requirements:

AC 220-240 V~, 50/60 Hz

Power Consumption:

415W

AC Outlets:

Switched x , 100 W max.

Dimensions (W x H x D)

440 x 160 x 385 mm

Weight (net): 14.1Kg

Standard Accessories:

AM Loop Antenna x 1

FM Antenna x 1

Remote Control Unit x 1

AAA-size Batteries x 2

Owner's Manual x 1

Micro Phone x 1

Zone II Remote Control Unit x 1 (With Battery)

\* LINE means CD, TAPE, VIDEO 1, VIDEO 2, AUX 1, AUX 2, DVD.

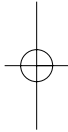
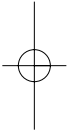
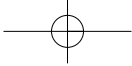
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• Improvements may result in specifications and features changing without notice.

• Illustrations may differ slightly from production models.





**LUXMAN CORPORATION, JAPAN**

